

Report

# Citywide Engineering and Traffic Survey

Antioch, California

February 6, 2015



Transportation  
Consultants

This Citywide Engineering and Traffic Survey has been prepared under the direction of a licensed Civil Engineer. The licensed Civil Engineer attests to the technical information contained therein, and has judged the qualifications of any technical specialists providing engineering data, which recommendations, conclusions and decisions are based. These surveys conform to Sections 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommend speed limit appropriate to facilitate the safe and orderly movement of traffic.

Prepared By:



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Chris D. Kinzel, PE  
Vice President  
TJKM Transportation Consultants  
4305 Hacienda Drive, Suite 550  
Pleasanton, CA 94588-2798  
Tel: 925.463.0611  
Fax: 925.463.3691



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- Appendix B – Recommended Speed Survey Summary





## Introduction and Summary

### Introduction

This report presents the results of the engineering and traffic survey conducted in 2014 by TJKM Transportation Consultants for the City of Antioch. The survey includes a summary of radar speed surveys, daily traffic counts, traffic accidents, and an analysis of roadway conditions for 68 identified street segments on arterial, collector, and local streets in Antioch.



The purpose of this survey is to evaluate if the speed limits currently posted on these segments are still appropriate for enforcement and to provide any recommended speed limit changes in accordance with current State of California regulations and guidelines. California Vehicle Code (CVC) Section 40802 requires that engineering and traffic surveys for speed limits should be conducted once every five, seven or ten years by governing municipalities in order to use radar or any other electronic device as a means of speed limit enforcement. Streets defined as “local streets and roads” as described in the amended subdivision (b) of Section 40802 “Speed Trap” of the CVC, effective January 1, 1982, are exempted.



Speed limits are established primarily for protecting the public from the unreasonable behavior of reckless, unreliable, or dangerous drivers. Speed limits are generally established at or near the 85th percentile speed. The 85th percentile speed, also referred to as the critical speed, is defined as the speed at or below which 85 percent of traffic is moving in free flow conditions. Speed limits established on this basis conform to the consensus of those who drive on the roadways as to what speed is reasonable and safe under normal driving conditions.



The current standard as described in the California Manual on Uniform Traffic Control Devices is to consider the speed limit at the nearest five miles per hour (mph) increment of the critical speed. However, a reduction of five mph is allowable to meeting needs of the community if justification is provided in accordance with the CVC through an engineering and traffic survey. Significant factors in determining reasonable and safe speed limits that are most appropriate to facilitate the orderly movement of traffic include prevailing speeds, accident rates, unexpected roadway conditions, and adjacent land uses, including residential and commercial densities. A more detailed discussion of current State regulations and guidelines is provided in the Speed Limit Recommendations section of the report. Applicable CVC Code sections are summarized in the California Vehicle Code Requirements section.



### Summary

Based on current State regulations and guidelines, recommendations are made in this report for the 68 identified Antioch roadway segments. Copies of speed survey data and subsequent analysis are included in Appendix A and a speed survey summary sheet and final recommendation for each of the segment is included in Appendix B. The existing and recommended speed limits for each street segment are summarized in Table 1. A change in speed limit is recommended for the following four roadway segments:



1. Segment 34 - Hillcrest Avenue from 18<sup>th</sup> Street to Sunset Drive – 35 miles per hour (mph) to 40 mph
2. Segment 39 - L Street from 2<sup>nd</sup> Street to 10<sup>th</sup> Street – 25mph to 30 mph
3. Segment 44 - Lone Tree Way from SR-4 to Putnam Street – 30 mph to 35 mph
4. Segment 57 - Somerville Road from Buchanan Road to James Donlon Boulevard – 35 mph to 45 mph





The procedures used to formulate recommendations in this report meet the requirements of the California Vehicle Code (CVC) Section 627, Sections 22348 through 22413 under Division 11, Chapter 7 “Speed Laws”, Section 40802, and others as referenced herein, and the 2014 Edition of the *California Manual on Uniform Traffic Control Devices* (California MUTCD). The California MUTCD is the amended version of the Federal Highway Administration MUTCD for use in California. Summarized below are applicable portions from the CVC related to preparation of an engineering and traffic survey for speed limits.



#### **California Vehicle Code (CVC) Summary**

**CVC Section 235 – Business District:** An area in which at least 50 percent of the properties are used for business for a minimum distance of 600 feet on one side or 300 feet on both sides of a highway.



**CVC Section 515 – Residence District:** An area outside of the Business District along a highway that has a minimum of 13 separate dwelling units on one side, or 16 on both sides within a distance of a quarter mile.



**CVC Section 627 – Engineering and Traffic Survey:** A survey of highway and traffic conditions in accordance with methods determined by the California Department of Transportation (Caltrans) for use by State and local authorities, which shall include consideration of prevailing speeds as determined by traffic engineering measurements, accident records, and highway, traffic, and roadside conditions not readily apparent to the driver. Local authorities may also consider residential density as defined in Section 515.



**CVC Section 22349 – Maximum Speed Limits:** Provides that no person shall drive a vehicle upon a highway at a speed greater than 65 mph. An exception to this, as stated in CVC Section 22356, is that Caltrans may increase the speed and these increases can only be made after consultation with the California Highway Patrol (CHP) and on the basis of an engineering and traffic survey.

**CVC Section 22350 – Basic Speed Law:** Provides that no person shall drive a vehicle upon a highway at a speed greater than is reasonable or prudent, and in no event at a speed that endangers the safety of persons or property. Reasonable is defined in Webster’s New World Dictionary as “just, of sound judgment, and not excessive.” Prudent is defined as “exercising sound judgment in practical matters, cautious and discreet in conduct, not rash and managing carefully.”



**CVC Section 22351 – Speed Law Violations:** States that the speed of any vehicle upon a highway not in excess of the limits specified in Section 22352 of the CVC or established as authorized in the CVC is lawful unless clearly proved to be in violation of the Basic Speed Law. This same section also states that the speed of any vehicle upon a highway in excess of the prima facie speed limits in Section 22352 of the CVC or established as authorized in the CVC is unlawful unless the defendant establishes by competent evidence that the speed in excess of said limits did not constitute a violation of the Basic Speed Law at the time, place and under the conditions then existing.



**CVC Section 22352 – Prima Facie Speed Limits:** Establishes prima facie speed limits for Local Roads and Streets. The literal definition of the phrase “prima facie” is “first appearance”. It is also defined at “first view” and “before investigation”. Prima facie evidence is evidence sufficient to establish fact, or to raise presumption of fact, unless rebutted. Prima facie speed limits are those that are defined in CVC Section 22352. These speed limits shall be applicable unless changed as authorized in the CVC and, if so changed, only when signs have been erected giving notice thereof.





A speed limit of 15 MPH applies at railroad crossings, at uncontrolled highway intersections with obstructed view, and on alleys. A speed limit of 25 mph applies on any highway other than State highways in any business or residence district, unless a different limit is established by procedures described in the CVC. The 25 mph limit also applies in school zones.



**CVC Sections 22357 (Increase of Local Speed Limits to 65 mph) and 22358 (Decrease of Local Speed Limits):** Authorizes local authorities to establish prima facie speed limits on streets and roads under their jurisdiction, on the basis of an engineering and traffic survey.



**CVC Sections 22358.3 (Decrease on Narrow Streets) and 22358.4 (Decrease of Local Limits Near Schools or Senior Centers):** Authorizes local agencies to reduce prima facie speed limits to 20 or 15 mph on narrow streets (with roadway width less than 25 feet), school zones, or senior centers on the basis of engineering and traffic surveys.



**CVC Section 22358.5 – Downward Speed Zoning:** Physical conditions such as width, curvature, grade, and surface conditions, or any other condition readily apparent to a driver, in the absence of other factors, would not require special downward speed zoning.



**CVC Section 40802 (a)(2) – Prima Facie Speed Limits:** Provides that prima facie speed limits established under CVC Sections 22352(b)(1), 22354, 22357, 22358, and 22358.3 may not be enforced by radar unless the speed limit has been justified by an engineering and traffic survey within the last five years. This CVC section does not apply to a local street, road or school zone. A local street or road is defined by the latest functional usage and federal-aid system maps or a street or road that primarily provides access to abutting residential property and meets the following criteria: (1) roadway is not more than 40 feet in width; (2) roadway is not more than one-half mile of uninterrupted length; and (3) roadway is not more than one travel lane in each direction.





## Survey Methodology

### Radar Checks

Traffic speed surveys were conducted in November 2014 with calibrated radar guns on days with fair weather, dry pavement, and clear visibility. An effort was made to ensure that the presence of radar survey equipment did not affect the speed of the traffic being surveyed. Locations were selected where the prevailing speeds were representative of the entire street segment. Most samples sizes for a particular segment included 100-200 vehicles. In rare instances, there were fewer than 100 vehicles in a given sample, but in no case were there fewer than 50 vehicles. Figure 1 shows the vicinity map of the study area and the study segments included as part of this engineering and traffic survey. The results of the radar speed survey data are shown in Appendix A.



### Analysis of Speed Data

The radar speed survey data was compiled and analyzed to determine the 50<sup>th</sup> percentile speed, 85<sup>th</sup> percentile speed, 10 mph pace speed, the percent of vehicles observed within the 10 mph pace speed, the range of speed observed and the average speed for each surveyed location. A description of these terms is provided below:

- **50<sup>th</sup> Percentile Speed (Median Speed):** The speed above and below which 50 percent of the sample speeds were observed. This value indicates the speed that a driver may choose to drive without the influence of any speed limits, speed signs, or enforcement.
- **85<sup>th</sup> Percentile Speed (Critical Speed):** The speed at or below which 85 percent of the sample speeds were observed. The 85<sup>th</sup> percentile speed of a spot speed survey is the primary indicator of the appropriate speed limit for a section of the roadway.
- **10 mph Pace Speed:** The 10 mph increment (range) of speeds containing the greatest number of vehicles. In almost all cases, the 85<sup>th</sup> percentile speed and the recommended speed lie within the range, frequently in the middle to upper range of the interval. The percent of vehicles that fall within the pace speed is an indicator of the bunching of vehicular speeds. The number of observed vehicles within the 10 mph pace is often between 60 and 80 percent of the entire sample.
- **Average speed:** The average speed is simply the cumulative speed divided by the number of observed vehicles.



The speed limit for each study segment was recommended after determining the average speed, 85<sup>th</sup> percentile speed, pace speed and considering other significant factors such as existing land use, roadway design characteristics and accident rates (based on accident records for the last three years) for the study segment.

### Traffic Counts

National Data & Surveying (NDS) conducted average daily traffic (ADT) counts at all study locations. These counts were used to determine the accident rates for each segment, which in turn was used as a factor in determining the appropriate speed limit for each segment. Figure 2 shows the map of ADT counts for the all the study segments.





### **Collision Data**

Collisions reported at study roadway segments were obtained from the Statewide Integrated Traffic Records System (SWITRS) database for a period of 5 years from January 2009 to December 2013. Collision rates are a significant factor in determining the appropriate speed limits. The speed survey summary sheet for each roadway segment included in Appendix B shows the number of collisions per year, accident rate, and average daily traffic. In addition, Table 1 shows a summary of the collision data for each roadway segment and Figure 3 shows the collision rate map for the study segments.



### **Driving the Streets**

A final field check involves an experienced traffic engineer driving each street segment while “floating” with prevailing traffic to determine the speed of traffic that is reasonable from the driver’s viewpoint. The traffic engineer evaluates the appropriateness of the 85<sup>th</sup> percentile speed and adds the perspective of human judgment to set the appropriate speed limit. Such factors as roadside development; the number and location of driveways; parked vehicles; emergency shoulder areas; schools and playgrounds; areas frequented by pedestrians; horizontal and vertical alignment of the roadway; intersection spacing, visibility and control; landscaping, and other less tangible factors, all contribute to establish the final recommended speed limit.





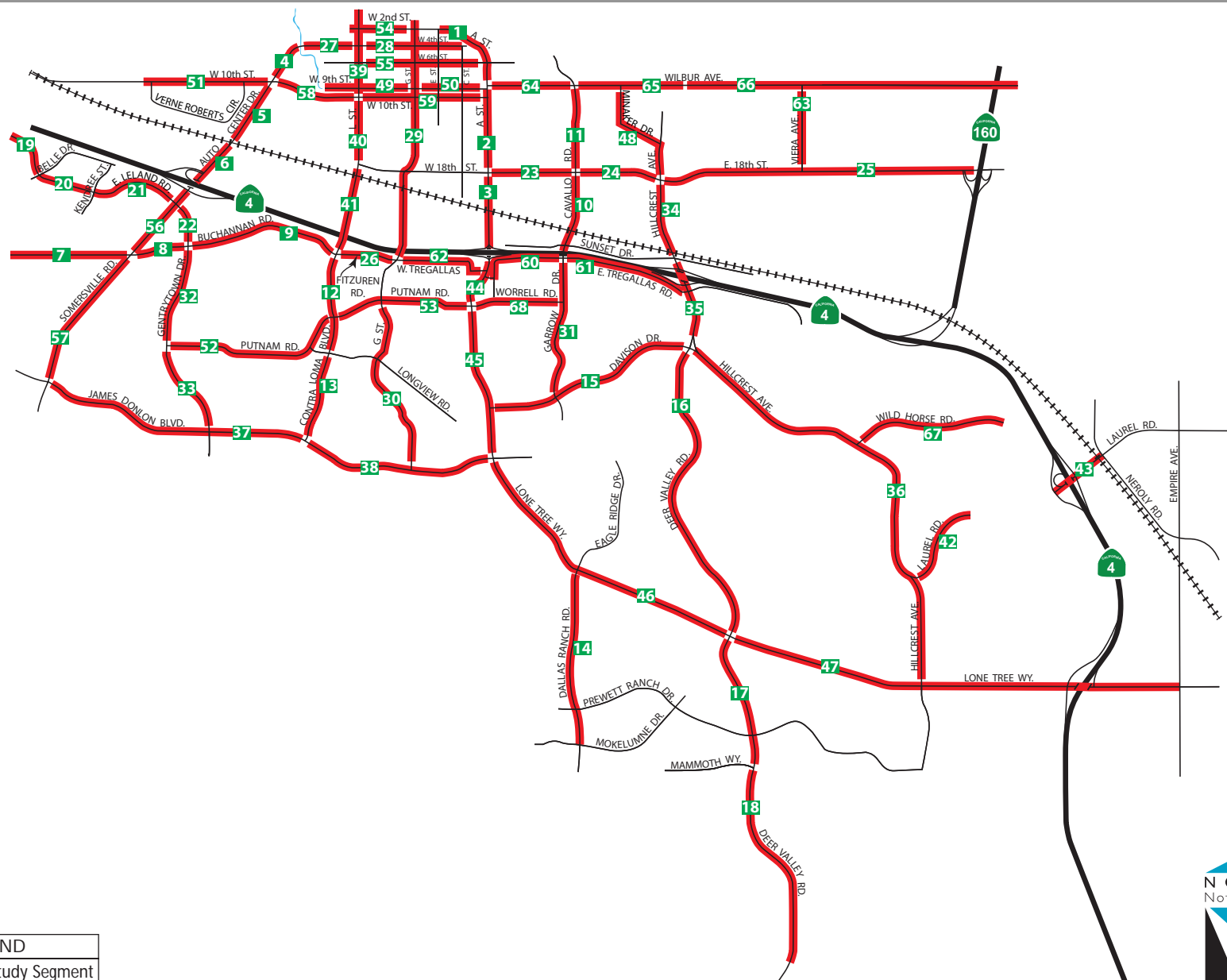


Figure 1

## 2014 Average Daily Traffic (ADT) Volumes

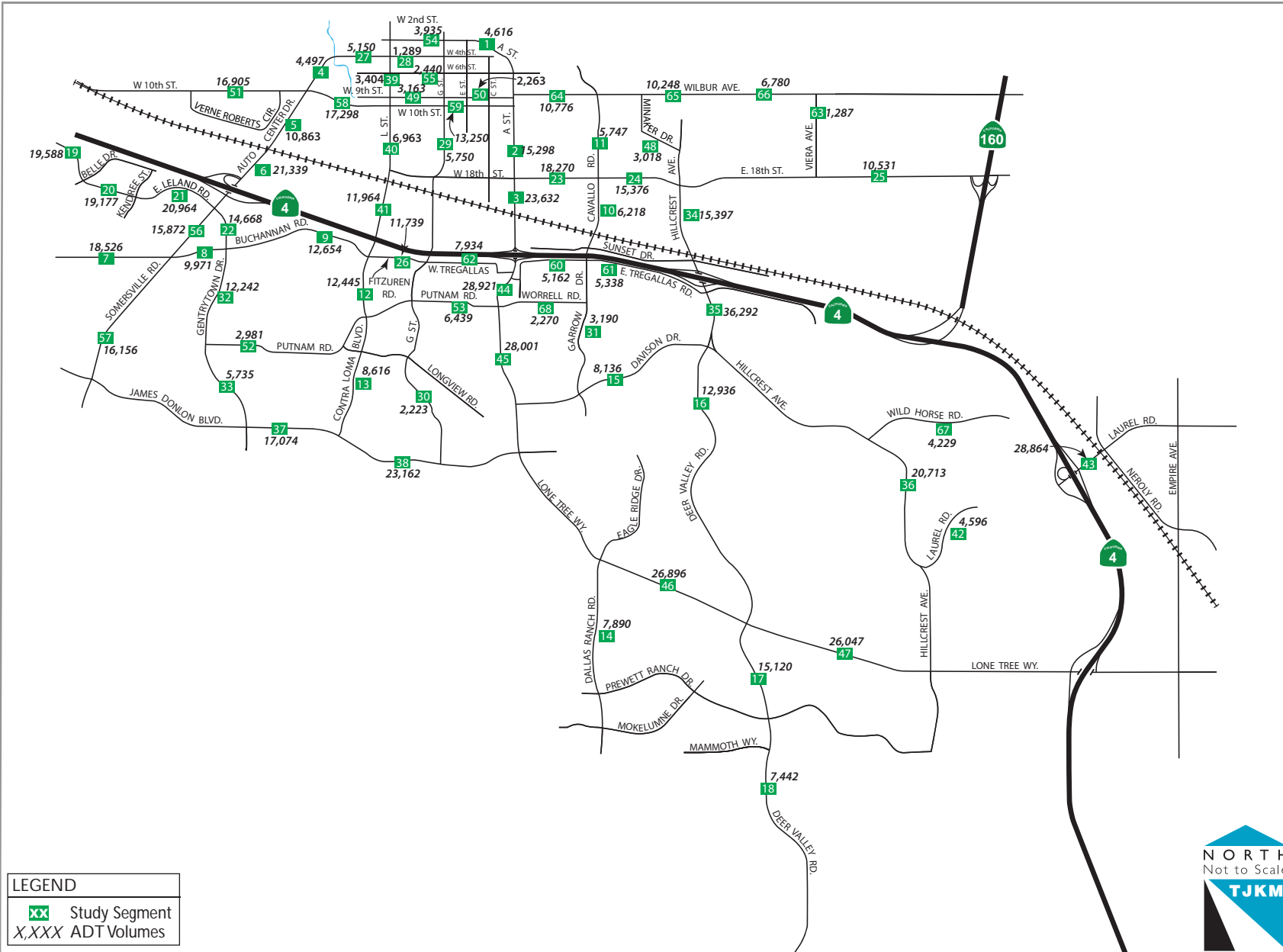


Figure 2



Figure 3



## Speed Limit Recommendations

Establishment of speed limits can be controversial and requires a rational, defensible, and consistent evaluation process. Speed limits are typically set near the 85<sup>th</sup> percentile speed which establishes an upper limit of what is considered reasonable and prudent. With all of the statistics inherent to the engineering and traffic speed survey process, there is a great deal of engineering judgment required. Speed limits should be reasonable and realistic regardless of the results of the field studies.



Reasonable speed limits are those at which responsible motorists would drive without enforcement and/or signage and depend on the voluntary compliance of the greater majority of motorists. Speed limits cannot be set arbitrarily low as this would create violators of the majority of drivers and would not command the respect of the public.



In 2004, in order to better conform to the intent of the federal standards as established in the Federal Highway Administration's Manual on Uniform Traffic Control Devices, and also to address some of the widespread disregard of the 5 miles per hour (mph) special downward speed zoning provision, the California Manual of Uniform Traffic Control Devices (CA MUTCD) replaced the Traffic Manual, and the speed zoning section of the Traffic Manual was changed to require rounding the 85<sup>th</sup> percentile to the nearest 5 mph increment rather than the lower 5 mph increment. This specific guideline revision resulted in raising certain street speed limits and had become a challenge to state and local jurisdictions.



In 2007, the California Traffic Control Devices Committee (CTCDC) ruled to approve a language change in the CA MUTCD to clarify how local speed limits should be set. The CTCDC was prompted to make this change due to major variations in the interpretation and application of the CA MUTCD Section 2B.13 "Speed Limit Sign (R2-1)" and to better distinguish the differences between "within" 5 mph of the 85<sup>th</sup> percentile speed and "round to the nearest" 5 mph of the 85<sup>th</sup> percentile speed for setting local speed limits. The changes included:



- Posted speed limits will be set "round to the nearest" 5 mph increment of the 85<sup>th</sup> percentile speed.
- Jurisdictions can lower this speed by an additional 5mph based on and justified by conditions and factors cited in the California Vehicle Code.



Caltrans ultimately issued a Traffic Operations Policy Directive (No. 09-04), effective July 1, 2009, which clearly defined these changes and incorporated new requirements into the CA MUTCD. Section 2B.13 of the 2014 Edition of the CA MUTCD now requires as a standard that a speed limit shall be established at the nearest 5 mph increment of the 85<sup>th</sup> percentile speed, except that the posted speed may be reduced by 5 mph from the nearest 5 mph increment of the 85<sup>th</sup> percentile speed in compliance with CVC Sections 627 and 22358.5.



For cases in which the nearest 5 mph increment of the 85<sup>th</sup> percentile speed would require rounding up, the speed limit may be rounded down to the nearest 5 mph increment below the 85<sup>th</sup> percentile speed if no further reduction is used.



Section 2B.13 further states that justification for reducing speed limits can be based on residential density, pedestrian/bicyclist safety and other factors not readily apparent to drivers but essential to meet the traffic safety needs of the community. The following factors may be considered to adjust and determine the final speed limits:



- Road characteristics, shoulder condition, grade, alignment, and sight distance
- 10 mph pace speed (a 10 mile range in speeds in which the highest number of data is recorded)
- Roadside development and environment
- Parking practices and bicycle/pedestrian activity
- Reported crash experience for at least a 12-month period



Additionally, the CA MUTCD recommends that speed zoning with 5 mph increments are preferable in urban areas, and that short speed zones should be avoided.



Based on the above guidelines, speed limit recommendations for the 68 street segments were established. Appendix B presents the results of the traffic survey analyses, which include prevailing speed data, accident history, traffic factors, and roadway conditions. The recommended speed limit for each street segment is also shown in Appendix B with a comment on the rationale for the recommendation. Figure 4 indicates the existing posted speed limit for all the study segments and Figure 5 shows the recommended speed limit for all segments.



Table 1 summarizes existing speed limit, critical speed and recommended speed limit for each street segment. Table 1 also summarizes data and analysis pertaining to the speed survey. The bolded rows indicate a change in the speed limit.





**Table 1: Engineering and Traffic Survey Summary**

Road Segment Number	Road Segment Name	Roadway Type	Direction	Number of Lanes	Posted Speed Limit (mph)	Determination of the Recommended Speed									
						ADT	Number of Collisions (Jan 09 - Dec 13)	Length (mi)	10 MPH Pace	Number in Pace	% in Pace	50% tile Speed	85% tile Speed	Recmd. Speed (mph)	Posted Speed (mph)
1	A St. from E St. to 10th St.	Arterial	NB/SB	2	25	4,616	13	0.57	22-31	203	94	25	28	25	25
2	A St. from 10th St. to 18th St.	Arterial	NB/SB	4	30	15,298	35	0.43	27-36	193	92	31	34	30	30
3	A St. from 18th St. to SR-4	Arterial	NB/SB	4	30	23,632	67	0.47	26-35	196	93	31	34	30	30
4	Auto Center Dr. from 4th St. to 10th St.	Arterial	NB/SB	4	35	4,497	7	0.44	32-41	131	91	35	39	35	35
5	Auto Center Dr. from 10th St. to SPRR	Arterial	NB/SB	4	35	10,863	11	0.42	31-40	197	92	35	38	35	35
6	Auto Center Dr. from SPRR to SR-4	Arterial	NB/SB	6	35	21,339	14	0.33	31-40	197	94	35	37	35	35
7	Buchanan Rd. from City Limits to Somersville Rd.	Arterial	EB/WB	2	45	18,526	12	0.64	44-53	190	85	48	52	45	45
8	Buchanan Rd. from Somersville Rd. to Gentrytown Dr.	Arterial	EB/WB	4	35	9,971	21	0.34	33-42	195	95	36	39	35	35
9	Buchanan Rd. from Gentrytown Dr. to Contra Loma Blvd.	Arterial	EB/WB	4	35	12,654	30	0.93	33-42	202	91	37	41	35	35
10	Cavallo Rd. from E. Treagallas Rd. to 18th St.	Collector	NB/SB	2	25	6,218	18	0.51	26-35	99	80	30	35	25	25
11	Cavallo Rd. from 18th St. to Wilbur Ave.	Collector	NB/SB	4	35	5,747	22	0.51	32-41	189	88	36	39	35	35
12	Contra Loma Blvd. from SR-4 to Longview Dr.	Arterial	NB/SB	4	35	12,445	36	0.69	33-42	199	95	37	40	35	35
13	Contra Loma Blvd. from Longview Dr. to James Donlon Blvd.	Arterial	NB/SB	4	35	8,616	11	0.52	31-42	204	99	36	38	35	35
14	Dallas Ranch Rd. from Lone Tree Wy. To Mokolomne Dr.	Arterial	NB/SB	4	45	7,890	22	1.03	37-46	138	91	42	45	45	45
15	Davison Dr. from Lone Tree Wy. To Hillcrest Ave.	Arterial	EB/WB	4	35	8,136	39	1.27	32-41	207	95	36	39	35	35
16	Deer Valley Rd. from Hillcrest Ave. to Lone Tree Wy.	Arterial	NB/SB	4	45	12,936	80	1.85	43-52	187	90	46	50	45	45
17	Deer Valley Rd. from Lone Tree Wy. To Mammoth Dr.	Arterial	NB/SB	4	45	15,120	38	0.81	40-52	203	98	45	48	45	45
18	Deer Valley Rd. from Mammoth Dr. to City Limits	Arterial	NB/SB	2	45	7,442	11	1.23	42-51	176	85	46	50	45	45
19	Delta Fair Blvd. from City Limits to Belle Dr.	Collector	EB/WB	4	35	19,588	6	0.27	31-40	188	92	36	39	35	35
20	Delta Fair Blvd. from Belle Dr. to Kendree St.	Arterial	EB/WB	4	30	19,177	25	0.33	29-38	176	85	35	38	30	30
21	Delta Fair Blvd. from Kendree St. to Somersville Rd.	Arterial	EB/WB	4	30	20,964	36	0.54	27-36	188	90	31	34	30	30
22	Delta Fair Blvd. from Somersville Rd. to Buchanan Rd.	Arterial	NB/SB	4	30	14,668	40	0.28	28-37	192	92	33	36	30	30
23	E. 18th St. from A St. to Cavallo Rd.	Arterial	EB/WB	4	30	18,270	39	0.50	29-38	149	93	33	36	30	30





Road Segment Number	Road Segment Name	Roadway Type	Direction	Number of Lanes	Posted Speed Limit (mph)	Determination of the Recommended Speed									
						ADT	Number of Collisions (Jan 09 - Dec 13)	Length (mi)	10 MPH Pace	Number in Pace	% in Pace	50% tile Speed	85% tile Speed	Recmd. Speed (mph)	Posted Speed (mph)
24	E. 18th St. from Cavallo Rd. to Hillcrest Ave.	Arterial	EB/WB	4	35	15,376	26	0.51	33-42	190	86	37	41	35	35
25	E. 18th St. from Hillcrest Ave. to City Limits	Arterial	EB/WB	4	45	10,531	34	1.93	37-59	187	81	46	50	45	45
26	Fitzuren Rd. from G St. to Contra Loma Blvd.	Local	EB/WB	2	30	11,739	8	0.35	28-37	186	86	32	37	30	30
27	W. 4th St. from Somersville Rd. to L St.	Collector	EB/WB	4	35	5,150	5	0.46	30-39	124	89	34	38	35	35
28	W. 4th St. from L St. to C. St.	Collector	EB/WB	2	25	1,289	4	0.60	18-27	108	92	23	26	25	25
29	G St. from 2nd St. to W. Tregallas Rd.	Collector	NB/SB	2	25	5,750	41	1.37	22-31	127	86	26	31	25	25
30	G St. from Putnam St. to James Donlon Blvd.	Collector	NB/SB	2	25	2,223	16	1.08	23-32	117	84	29	33	25	25
31	Garrow Dr. from E. Tregallas Rd to Davison Dr.	Collector	NB/SB	2	25	3,190	17	0.85	21-30	105	93	25	29	25	25
32	Gentrytown Dr. from Buchanan Rd. to Putnam St.	Collector	NB/SB	2	25	12,242	9	0.59	27-36	185	89	32	35	25	25
33	Gentrytown Dr. from Putnam St. to James Donlon Blvd.	Collector	NB/SB	2	25	5,735	6	0.59	25-34	138	85	31	34	25	25
34	Hillcrest Ave. from 18th St. to Sunset Dr.	Arterial	NB/SB	4	35	15,397	13	0.46	35-44	186	84	39	43	40	35
35	Hillcrest Ave. from Sunset Dr. to Davison Dr.	Arterial	NB/SB	6	45	36,292	20	0.55	36-45	194	93	40	44	45	45
36	Hillcrest Ave. from Davison Dr. to Lone Tree Wy.	Arterial	NB/SB	4	45	20,713	93	1.85	42-51	212	90	46	49	45	45
37	James Donlon Blvd. from Somersville Rd. to Contra Loma Blvd.	Arterial	EB/WB	4	40	17,074	52	1.56	37-46	193	93	42	44	40	40
38	James Donlon Blvd. from Contra Loma Blvd. to Lone Tree Wy.	Arterial	EB/WB	4	40	23,162	54	1.56	38-47	196	92	42	45	40	40
39	L St. from 2nd St. to 10th St.	Arterial	NB/SB	4	25	3,404	17	0.39	29-38	99	85	33	38	30	25
40	L St. from 10th St. to 18th St.	Arterial	NB/SB	2	35	6,963	16	0.39	30-39	190	91	35	38	35	35
41	L St. from 18th St. to SR-4	Arterial	NB/SB	4	35	11,964	25	0.44	31-40	196	94	34	37	35	35
42	Laurel Rd. from Hillcrest Ave. to End	Arterial	NB/SB	4	45	4,596	8	0.55	41-50	197	94	46	48	45	45
43	Laurel Rd. from SR-4 to City Limits	Arterial	NB/SB	6	45	28,864	4	0.33	42-51	210	92	46	49	45	45
44	Lone Tree Wy. From SR-4 to Putnam St.	Arterial	NB/SB	4	30	28,921	49	0.33	33-42	210	95	37	40	35	30
45	Lone Tree Wy. From Putnam St. to James Donlon Blvd.	Arterial	NB/SB	4	35	28,001	84	0.91	35-44	182	86	40	43	35	35
46	Lone Tree Wy. From James Donlon Blvd. to Deer Valley Rd.	Arterial	NB/SB	5	45	26,896	85	1.80	36-45	178	81	40	45	45	45
47	Lone Tree Wy. From Deer Valley Rd. to City Limits	Arterial	EB/WB	6	45	25,965	106	2.56	43-52	194	94	46	49	45	45



Road Segment Number	Road Segment Name	Roadway Type	Direction	Number of Lanes	Posted Speed Limit (mph)	Determination of the Recommended Speed									
						ADT	Number of Collisions (Jan 09 - Dec 13)	Length (mi)	10 MPH Pace	Number in Pace	% in Pace	50% tile Speed	85% tile Speed	Recmd. Speed (mph)	Posted Speed (mph)
48	Minaker/13th/Hillcrest from Wilbur Ave. to 18th St.	Collector	NB/SB	2	25	3,018	11	0.68	24-33	127	89	29	32	25	25
49	W. 9th St. from O St. to G St.	Collector	EB/WB	2	25	3,163	8	0.53	23-32	93	82	27	32	25	25
50	W. 9th St. from G St. to A St.	Collector	EB/WB	2	25	2,263	4	0.42	20-29	92	88	24	28	25	25
51	Pittsburg-Antioch (W. 10th St) from City Limits to Auto Center Dr.	Arterial	EB/WB	2	50	16,095	22	0.74	42-51	177	78	46	51	50	50
52	Putnam St. from Gentrytown Dr. to Contra Loma Blvd.	Collector	EB/WB	2	25	2,981	15	1.09	27-36	93	81	31	35	25	25
53	Putnam St. from Contra Loma Blvd. to Lone Tree Wy.	Collector	EB/WB	2	25	6,439	32	0.82	26-35	118	81	31	35	25	25
54	W. 2nd St. from L St. to G St.	Collector	EB/WB	2	25	3,935	7	0.32	16-25	114	93	20	23	25	25
55	W. 6th St. from L St. to A St.	Local	EB/WB	2	25	2,440	13	0.74	21-30	106	91	25	29	25	25
56	Somersville Rd. from SR-4 to Buchanan Rd.	Arterial	NB/SB	4	35	15,872	54	0.54	24-33	192	89	29	32	35	35
57	<b>Somersville Rd. from Buchanan Rd. to James Donlon Blvd.</b>	<b>Arterial</b>	<b>NB/SB</b>	<b>2/4</b>	<b>35</b>	<b>16,156</b>	<b>33</b>	<b>0.90</b>	<b>42-51</b>	<b>180</b>	<b>88</b>	<b>46</b>	<b>50</b>	<b>45</b>	<b>35</b>
58	W. 10th St. from Auto Center Dr. to L St.	Arterial	EB/WB	4	35	17,298	30	0.54	33-42	188	89	37	41	35	35
59	W. 10th St. from L St. to A St.	Collector	EB/WB	2	25	13,250	56	0.74	23-32	207	96	27	30	25	25
60	E. Tregallas Rd. from Lone Tree Wy. To Garrow Dr.	Local	EB/WB	2	25	5,162	18	0.56	28-37	182	84	32	36	25	25
61	E. Tregallas Rd. from Garrow Dr. to Hillcrest Ave.	Local	EB/WB	2	35	5,338	13	0.76	33-42	163	79	38	43	35	35
62	W. Tregallas Rd. from G St. to Lone Tree Wy.	Local	EB/WB	2	25	7,934	31	0.56	24-33	192	90	29	32	25	25
63	Viera Ave. from Wilbur Ave. to 18th St.	Collector	NB/SB	2	25	1,287	2	0.50	29-38	70	67	33	38	25	25
64	Wilbur Ave. from A St. to Cavallo Rd.	Arterial	EB/WB	4	40	10,766	8	0.49	36-45	197	91	40	44	40	40
65	Wilbur Ave. from Cavallo Rd. to 1600 ft. east of Minaker Dr.	Arterial	EB/WB	4	40	10,248	7	0.59	36-45	192	93	40	44	40	40
66	Wilbur Ave. from 1600 ft. east of Minaker Dr. to City Limits	Arterial	EB/WB	2	45	6,780	5	0.74	41-50	178	86	45	49	45	45
67	Wild Horse Rd. from Hillcrest Ave. to Slatten Ranch Rd.	Collector	EB/WB	4	45	4,229	17	0.88	40-49	106	98	45	47	45	45
68	Worrell Rd. from Lone Tree Wy. To Garrow Dr.	Collector	EB/WB	2	25	2,270	5	0.53	21-30	109	91	26	29	25	25



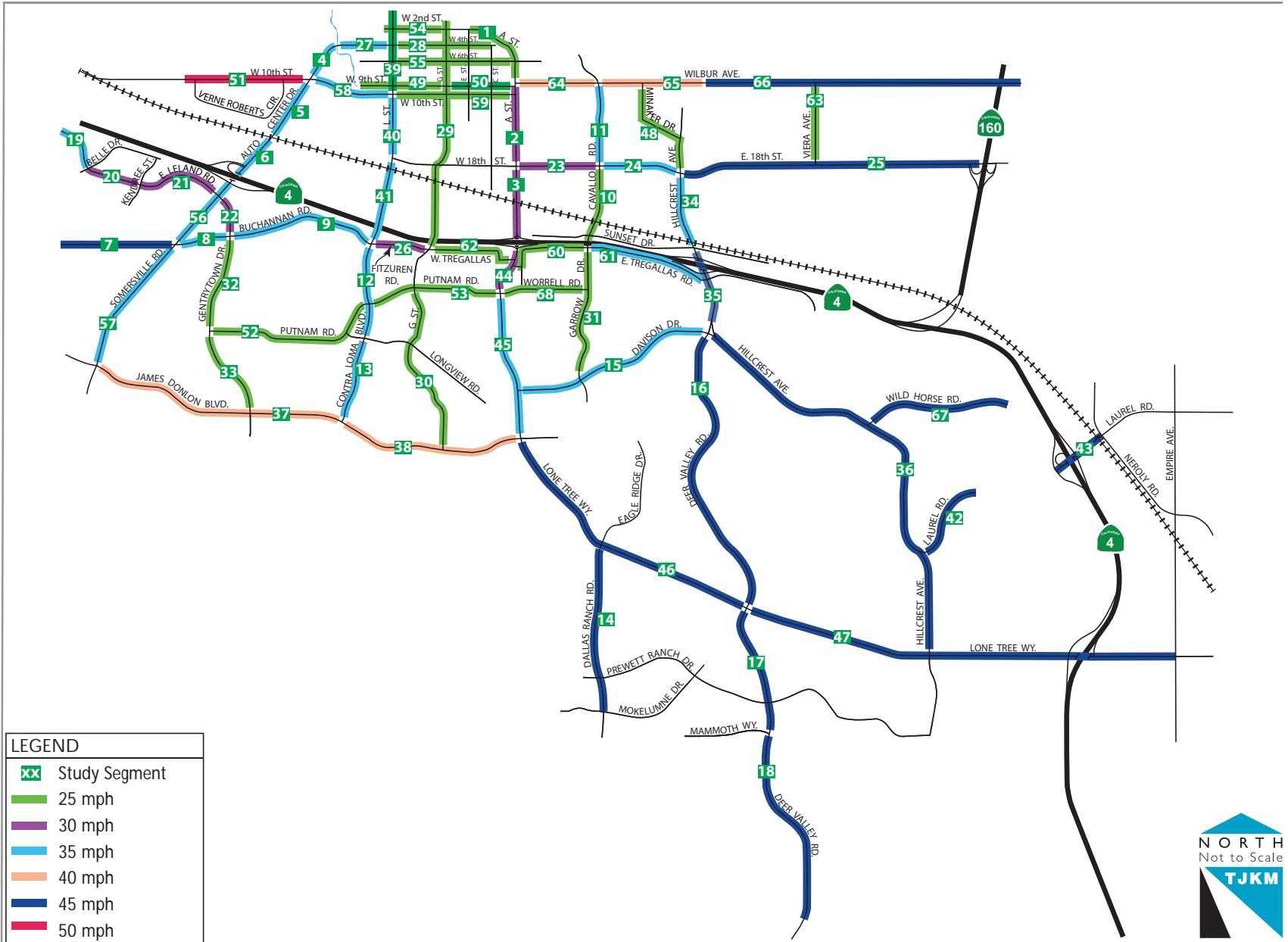


Figure 4

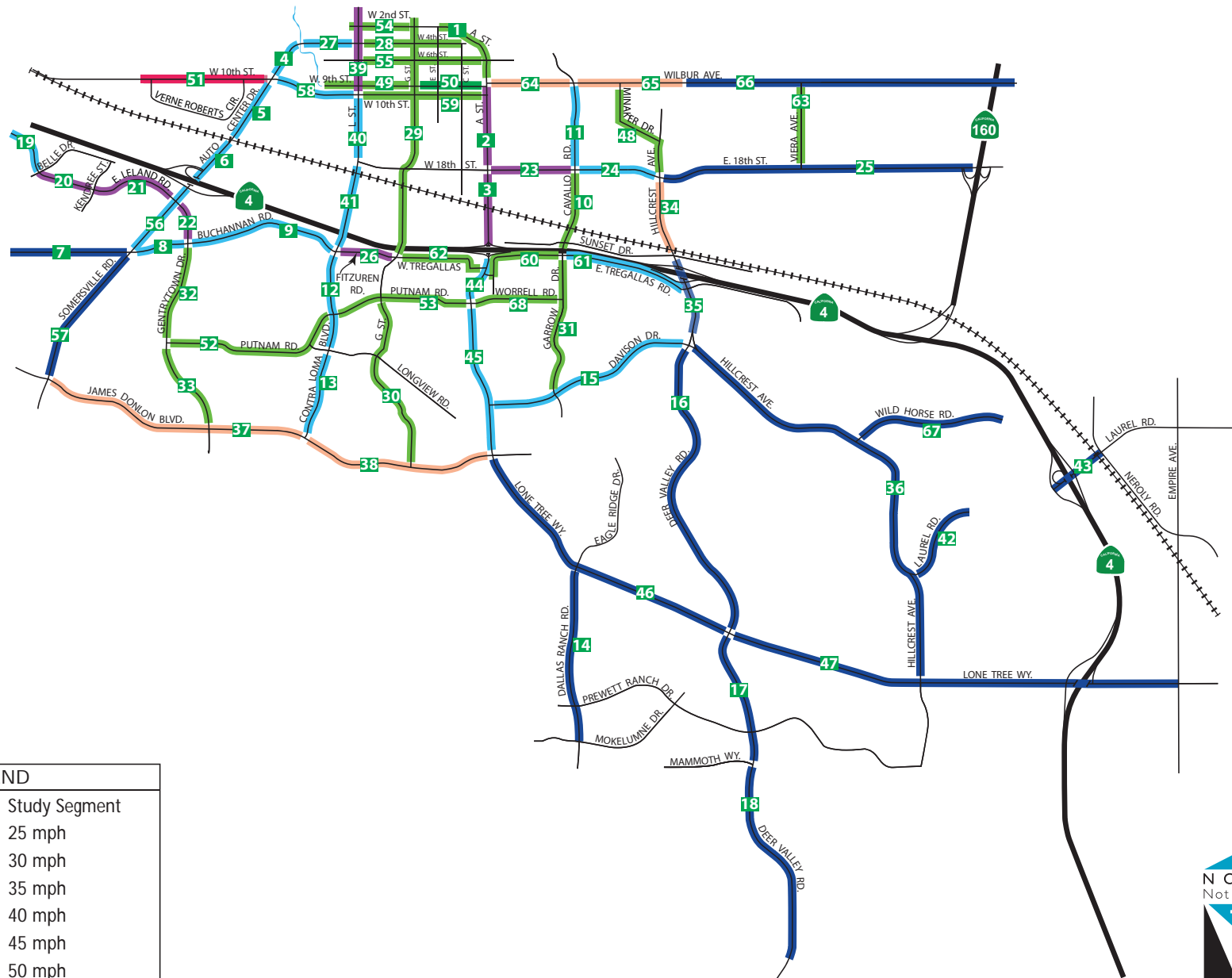


Figure 5



## Study Participants

### TJKM Transportation Consultants

Nayan Amin	Project Manager
Jeff Lacap	Project Engineer
Xiaonan Zhou	Project Engineer
Sandeep Paparaju	Project Engineer
Michelle Macer	Word Processing
Dan Harrison	Graphics



### Data Collection

Bill Nichols	National Data Services
Brian Nichols	National Data Services



### Persons Consulted

Lynne Filson	City of Antioch
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## Appendix A – Detailed Speed Survey Forms



# Spot Speed Study

Segment #1: A St.  
between E St. to 10th St.

City of Antioch

Survey Time: 1245-1320

Street Width: 28 Ft

DATE: 11/6/2014

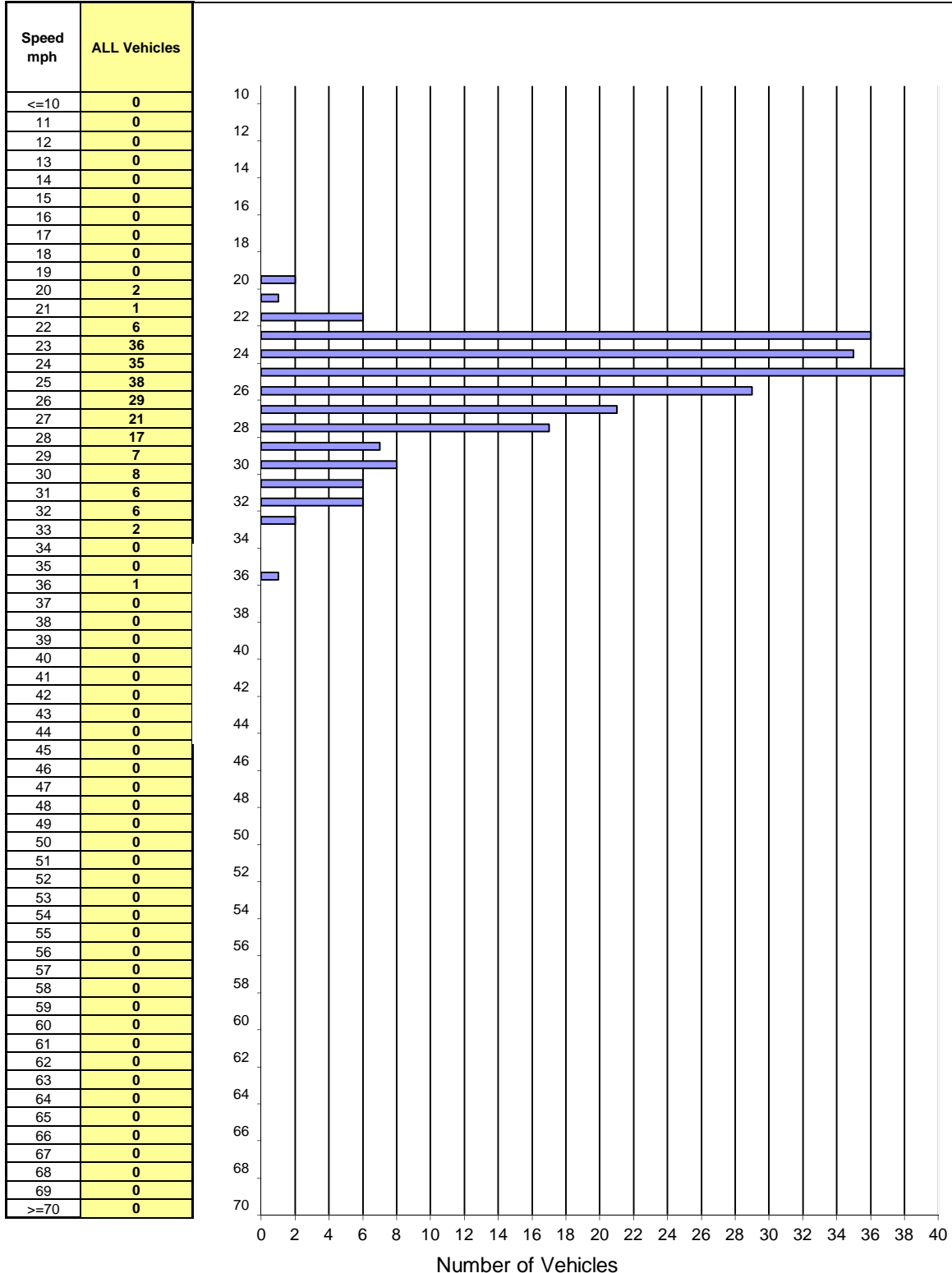
Location: 710 A Street

DAY: Thursday

Posted Speed: 25 MPH

Project #: 14-7726-001

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	215	20-36	25 mph	28 mph	22 - 31	203	94%	1% / 3	5% / 9

# Spot Speed Study

Segment #2: A St.  
between 10th St. to 18th St.

City of Antioch

Survey Time: 1200-1240

Street Width: 52 Ft

DATE: 11/19/2014

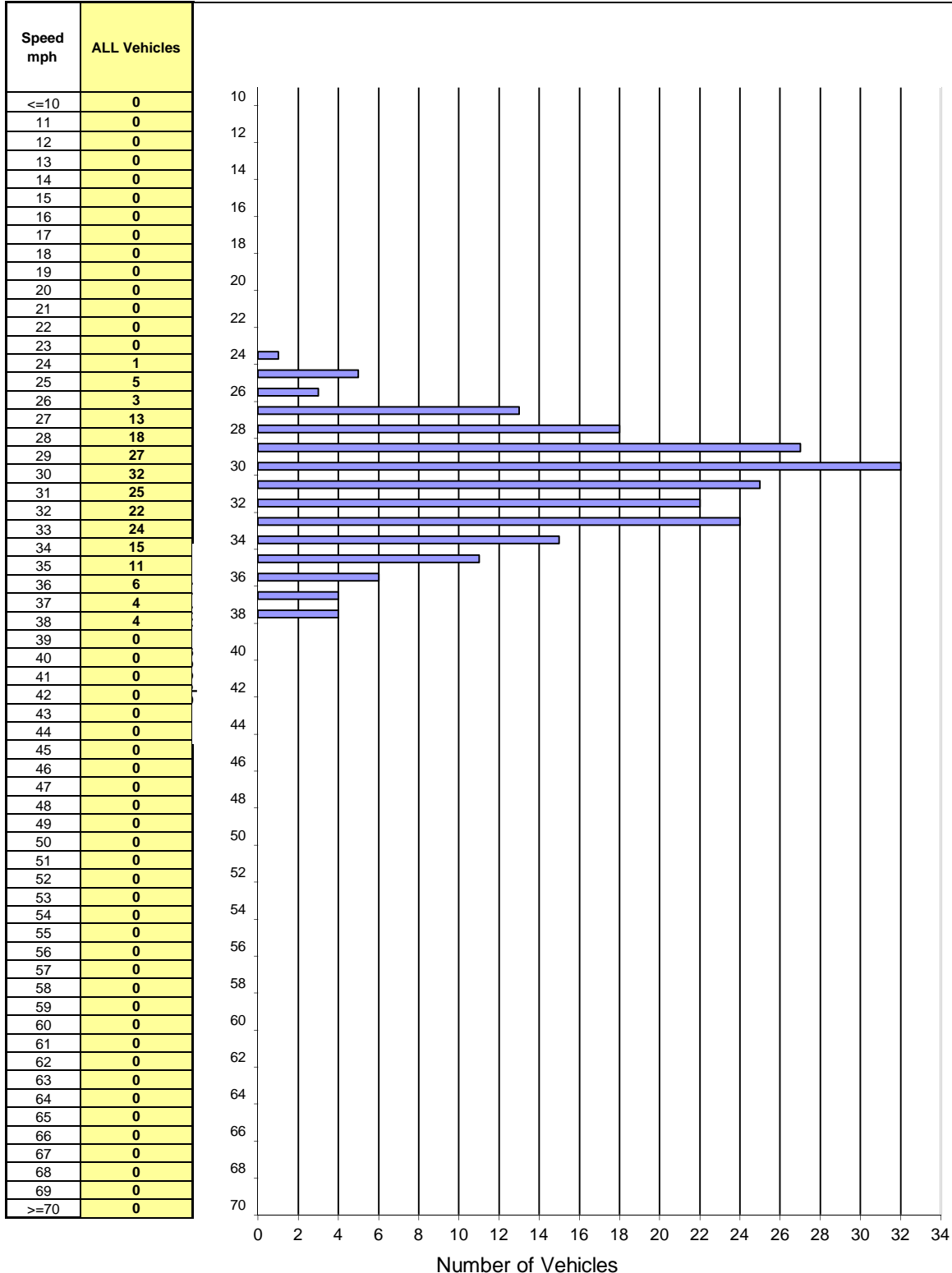
Location: 1513 A Street

DAY: Wednesday

Posted Speed: 30 MPH

Project #: 14-7726-002

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	210	24-38	31 mph	34 mph	27 - 36	193	92%	4% / 9	4% / 8

# Spot Speed Study

Segment #3: A St.  
between 18th St. to SR-4

City of Antioch

Survey Time: 1300-1350

Street Width: 58 Ft

DATE: 11/19/2014

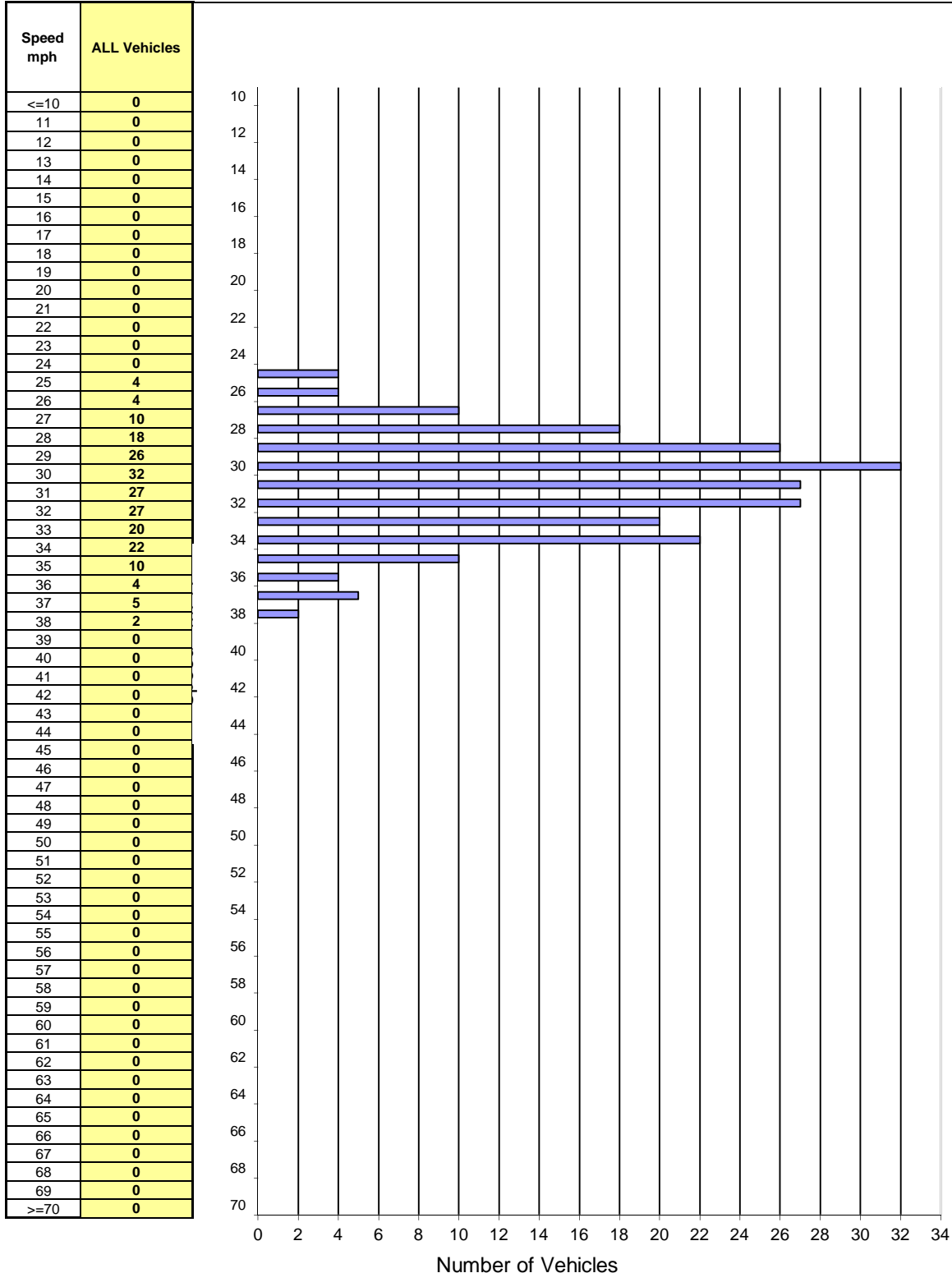
Location: 1927 A Street

DAY: Wednesday

Posted Speed: 30 MPH

Project #: 14-7726-003

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	211	25-38	31 mph	34 mph	26 - 35	196	93%	1% / 4	6% / 11

# Spot Speed Study

Segment 4: Auto Center Dr.  
between 4th St. and 10th St.

City of Antioch

Survey Time: 1320-1420

Street Width: 62 Ft

DATE: 11/10/2014

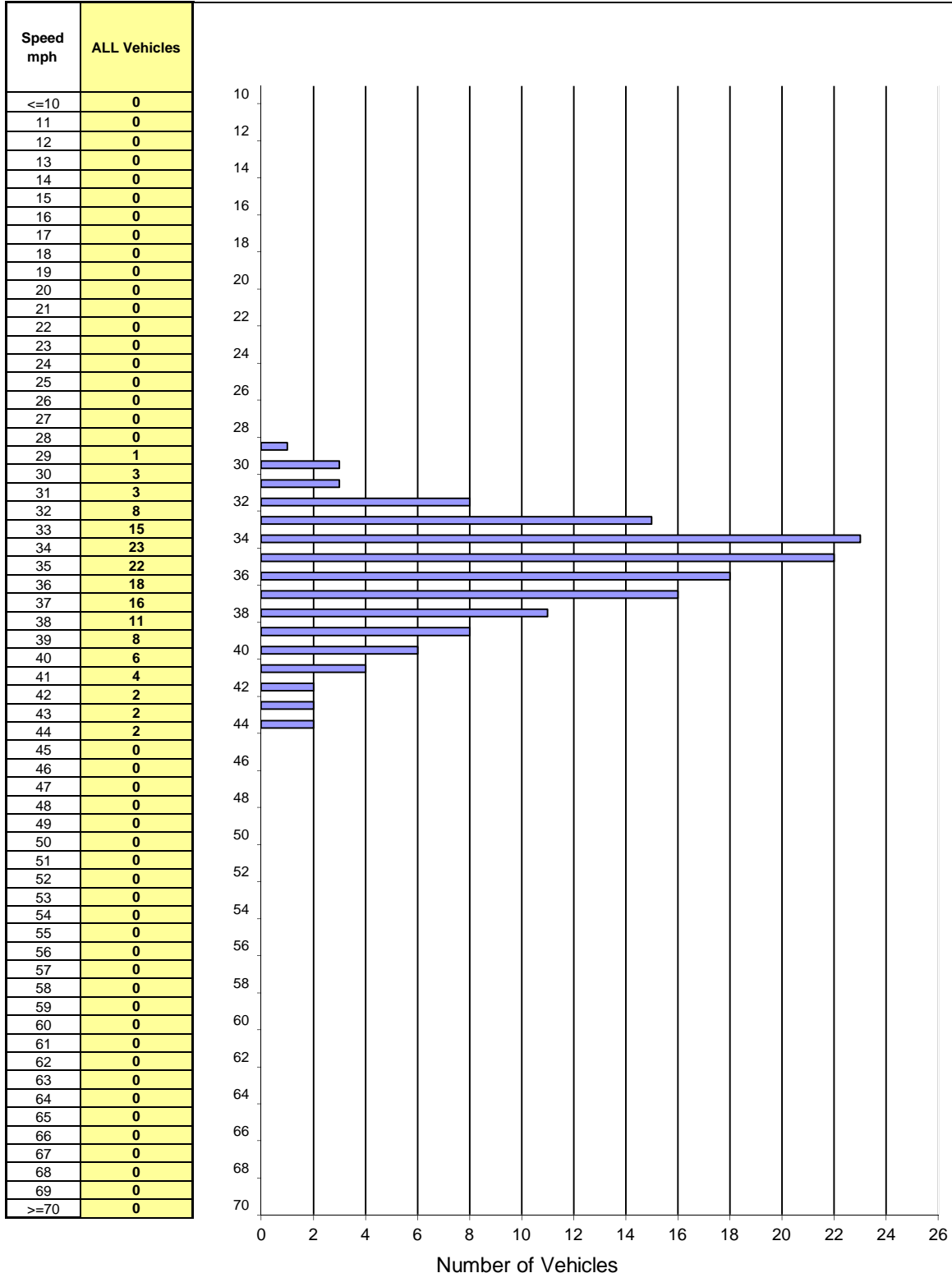
Location: Auto Center Drive mid block between 10th Street and 6th Street

DAY: Monday

Posted Speed: 35 MPH

Project #: 14-7726-004

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	144	29-44	35 mph	39 mph	32 - 41	131	91%	4% / 7	5% / 6



# Spot Speed Study

Segment #5: Auto Center Dr.  
between 4th St. and 10th St.

City of Antioch

Survey Time: 0900-0940

Street Width: 60 Ft

DATE: 11/7/2014

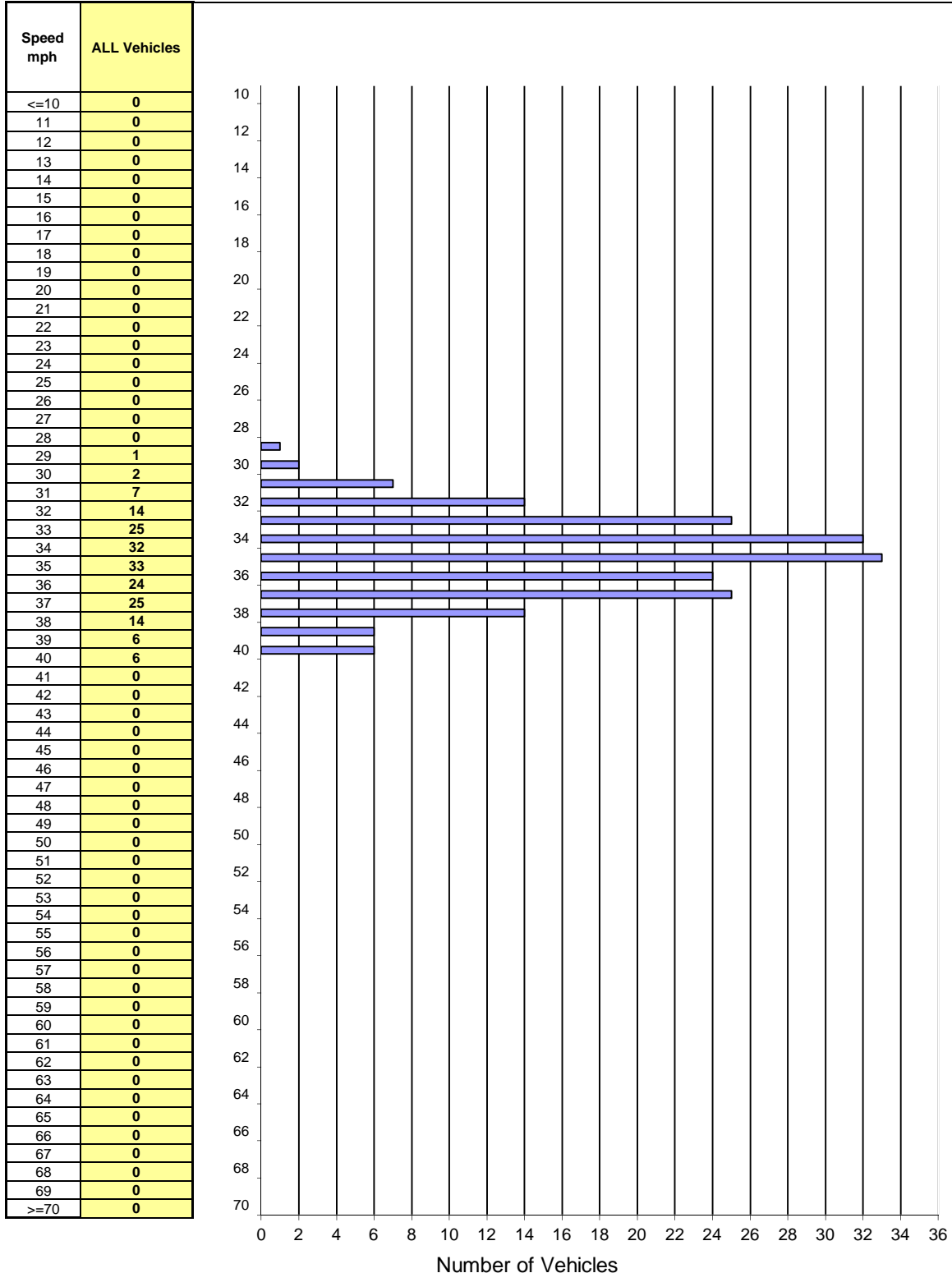
Location: 1553 Auto Center Drive

DAY: Friday

Posted Speed: 35 MPH

Project #: 14-7726-005

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	189	29-44	35 mph	37 mph	31 - 40	186	98%	1% / 3	0% / 0

# Spot Speed Study

Segment #6: Auto Center Dr.  
between SPRR and SR-4

City of Antioch

Survey Time: 0900-0940

Street Width: 58 Ft

DATE: 11/25/2014

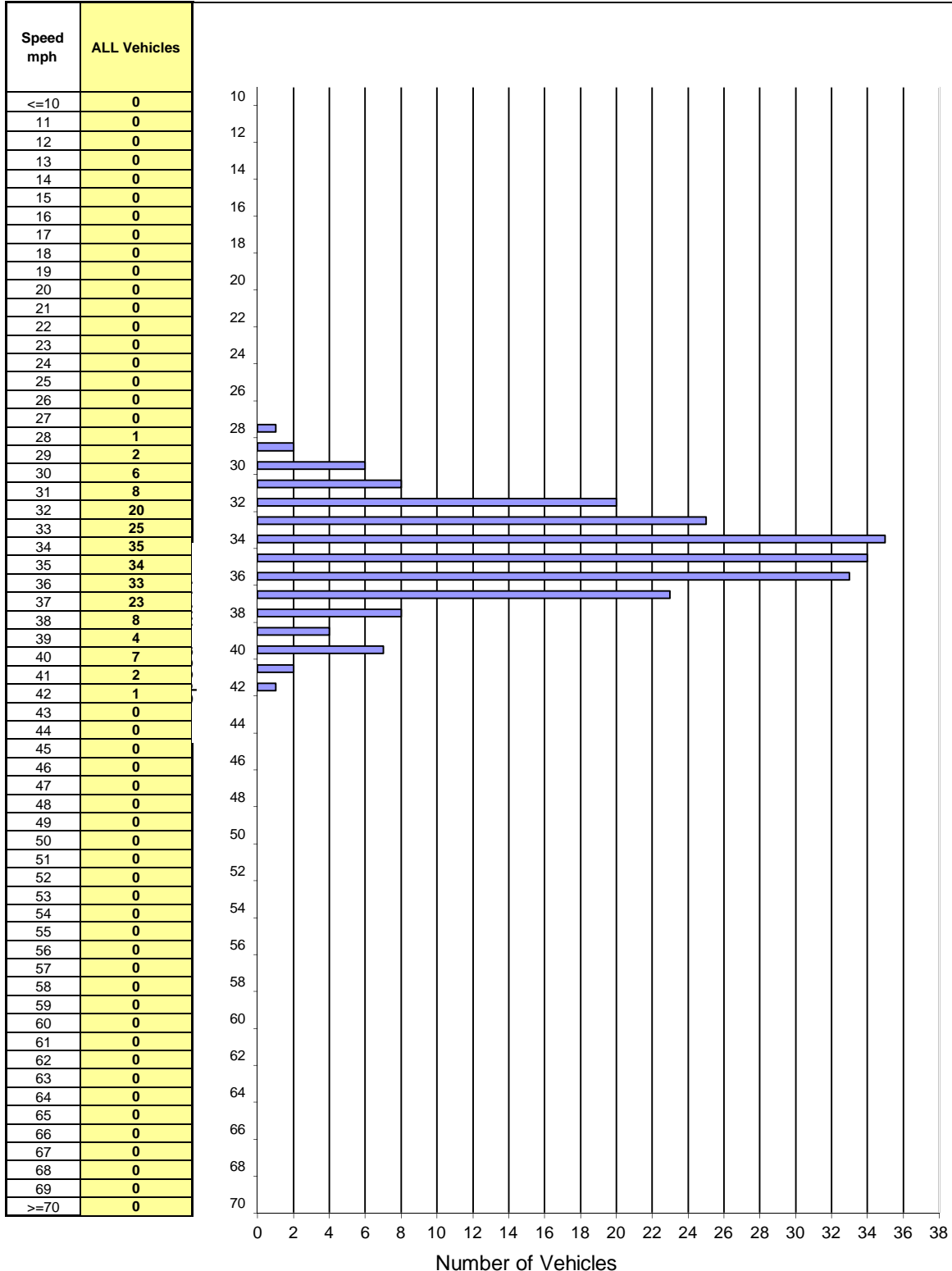
Location: 1865 Auto Center Drive

DAY: Tuesday

Posted Speed: 35 MPH

Project #: 14-7726-006

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	209	28-42	35 mph	37 mph	31 - 40	197	94%	4% / 9	2% / 3

# Spot Speed Study

Segment #7: Buchanan Rd.  
between City Limits and Somersville Rd.

City of Antioch

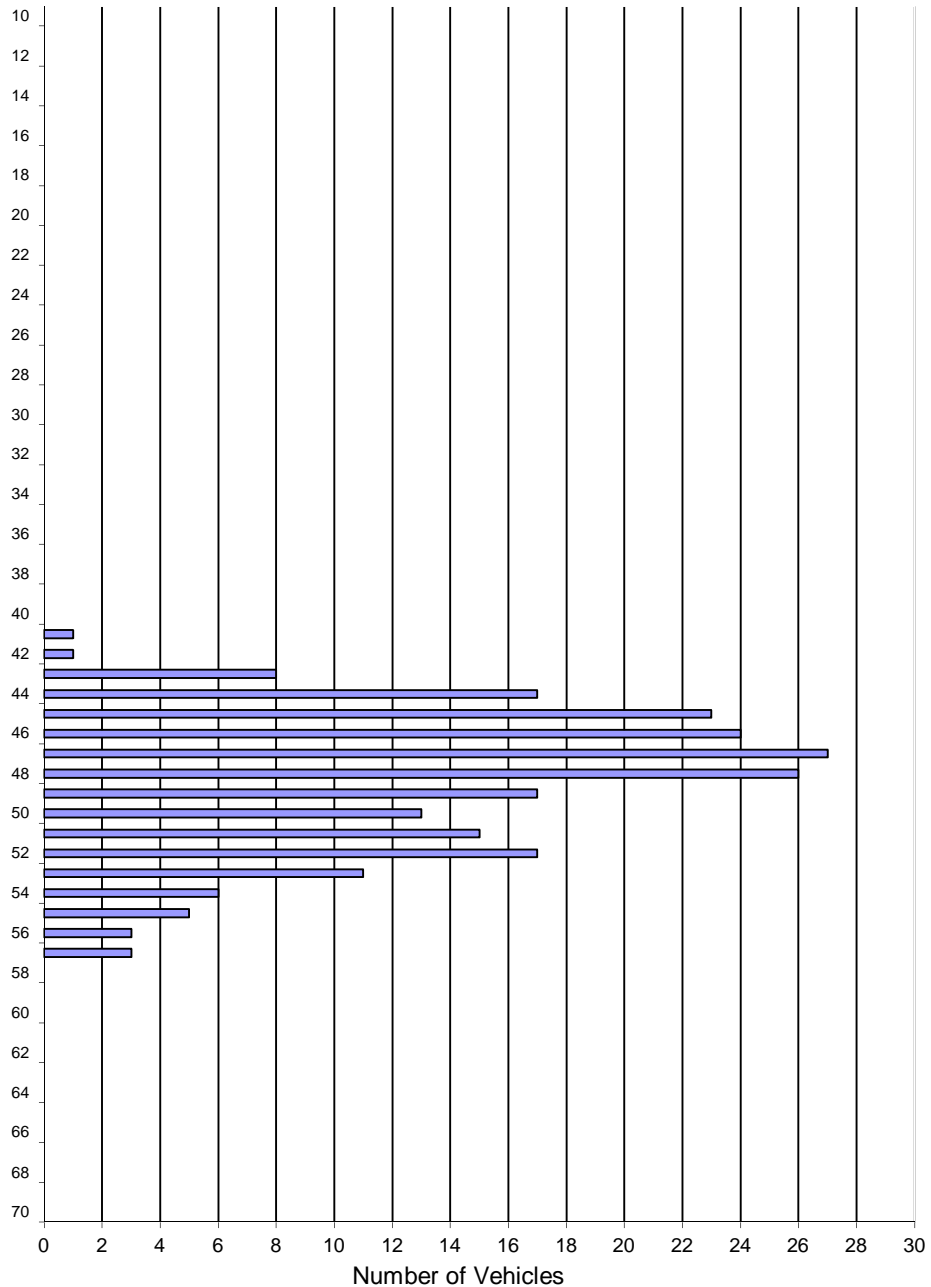
Survey Time: 2:30-3:30 1100-1140  
DATE: 11/17/2014  
DAY: Monday

Street Width: 28 Ft  
Location: 1784 Buchananc Road  
Posted Speed: 45 MPH

Project #: 14-7726-007

## Eastbound & Westbound Spot Speeds

Speed mph	ALL Vehicles
<=10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0
31	0
32	0
33	0
34	0
35	0
36	0
37	0
38	0
39	0
40	0
41	1
42	1
43	8
44	17
45	23
46	24
47	27
48	26
49	17
50	13
51	15
52	17
53	11
54	6
55	5
56	3
57	3
58	0
59	0
60	0
61	0
62	0
63	0
64	0
65	0
66	0
67	0
68	0
69	0
>=70	0



SPEED PARAMETERS										
Class	Count	Average Speed	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	217	#VALUE!	40-56	48 mph	52 mph	44 - 53	190	88%	4% / 10	8% / 17

# Spot Speed Study

Segment #8: Buchanan Rd.  
between Somersville Rd. and Gentrytown Dr.

City of Antioch

Survey Time: 1000-1030

Street Width: 53 Ft

DATE: 11/17/2014

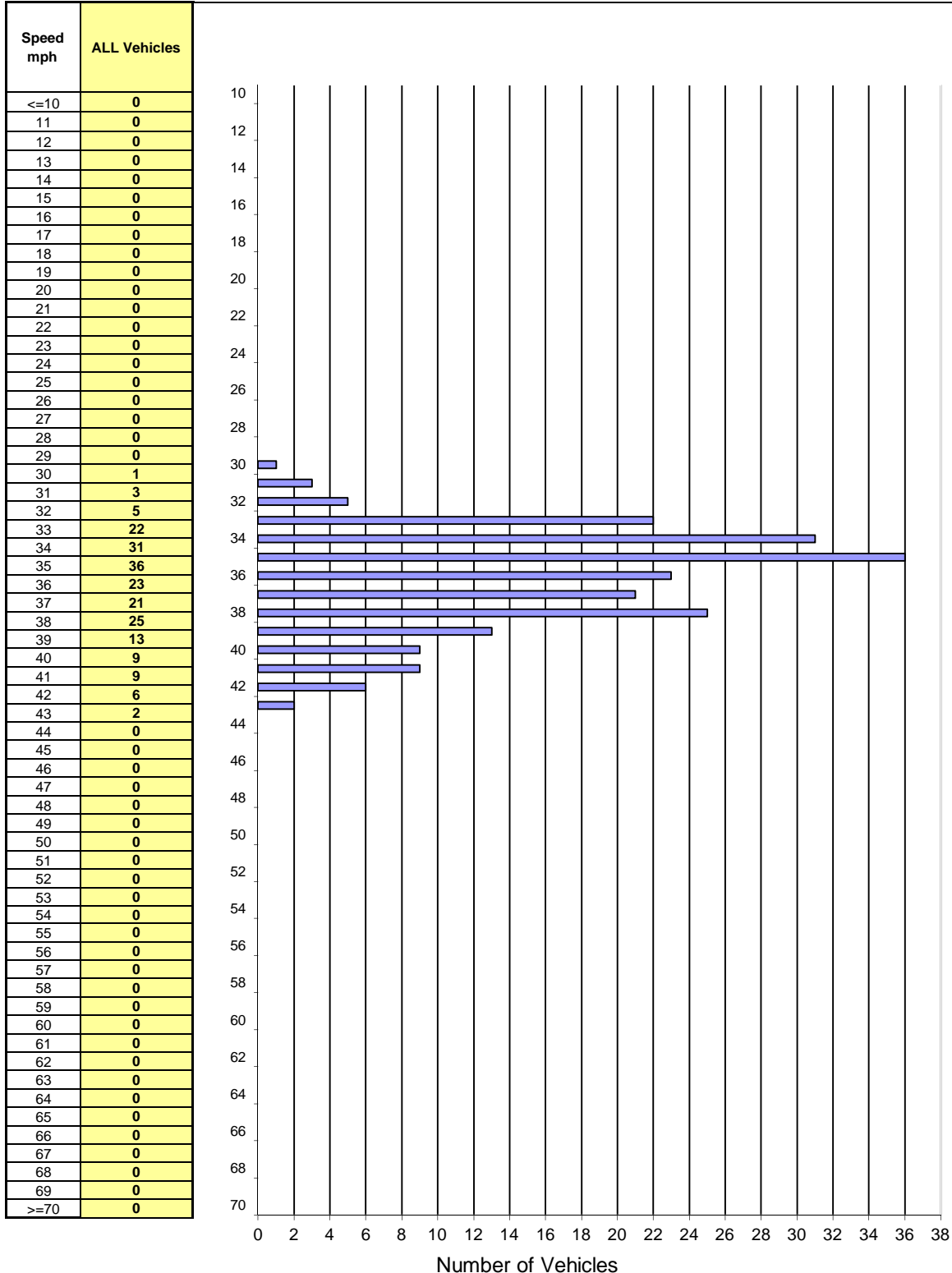
Location: 2388 Buchanan Road

DAY: Monday

Posted Speed: 35 MPH

Project #: 14-7726-008

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	206	30-43	36 mph	39 mph	33 - 42	195	95%	4% / 9	1% / 2

# Spot Speed Study

Segment #9: Buchanan Rd.  
between Gentrytown Dr. to Contra Loma Blvd.

City of Antioch

Survey Time: 1200-1240

Street Width: 68 Ft

DATE: 11/7/2014

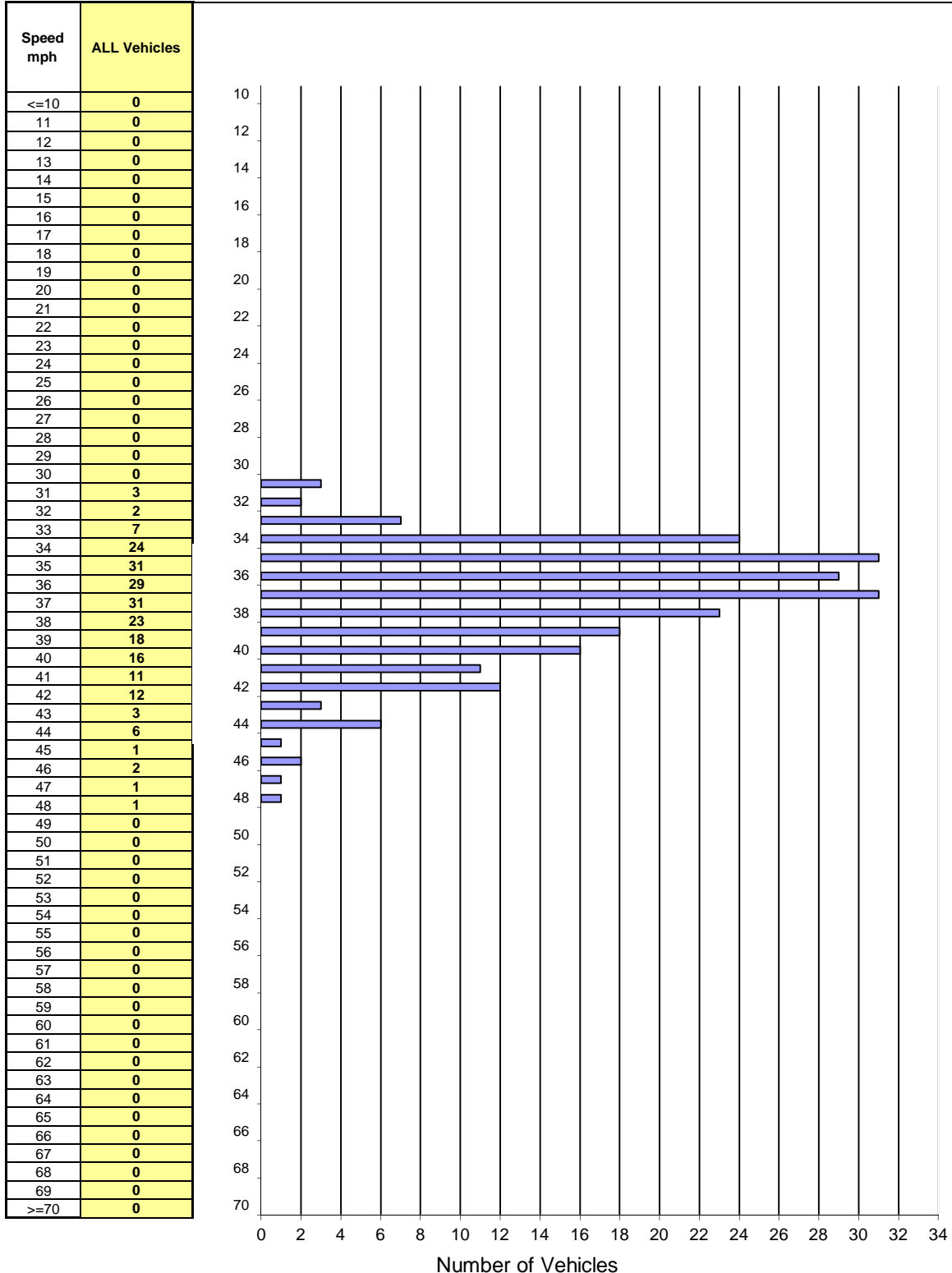
Location: 1304 Buchanan Road

DAY: Friday

Posted Speed: 35 MPH

Project #: 14-7726-009

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	221	31-48	37 mph	41 mph	33 - 42	202	91%	2% / 5	7% / 14

# Spot Speed Study

Segment #10: Cavallo Rd.  
between E. Tregallas Rd. and 18th St.

City of Antioch

Survey Time: 0900-1010

Street Width: 36 Ft

DATE: 11/10/2014

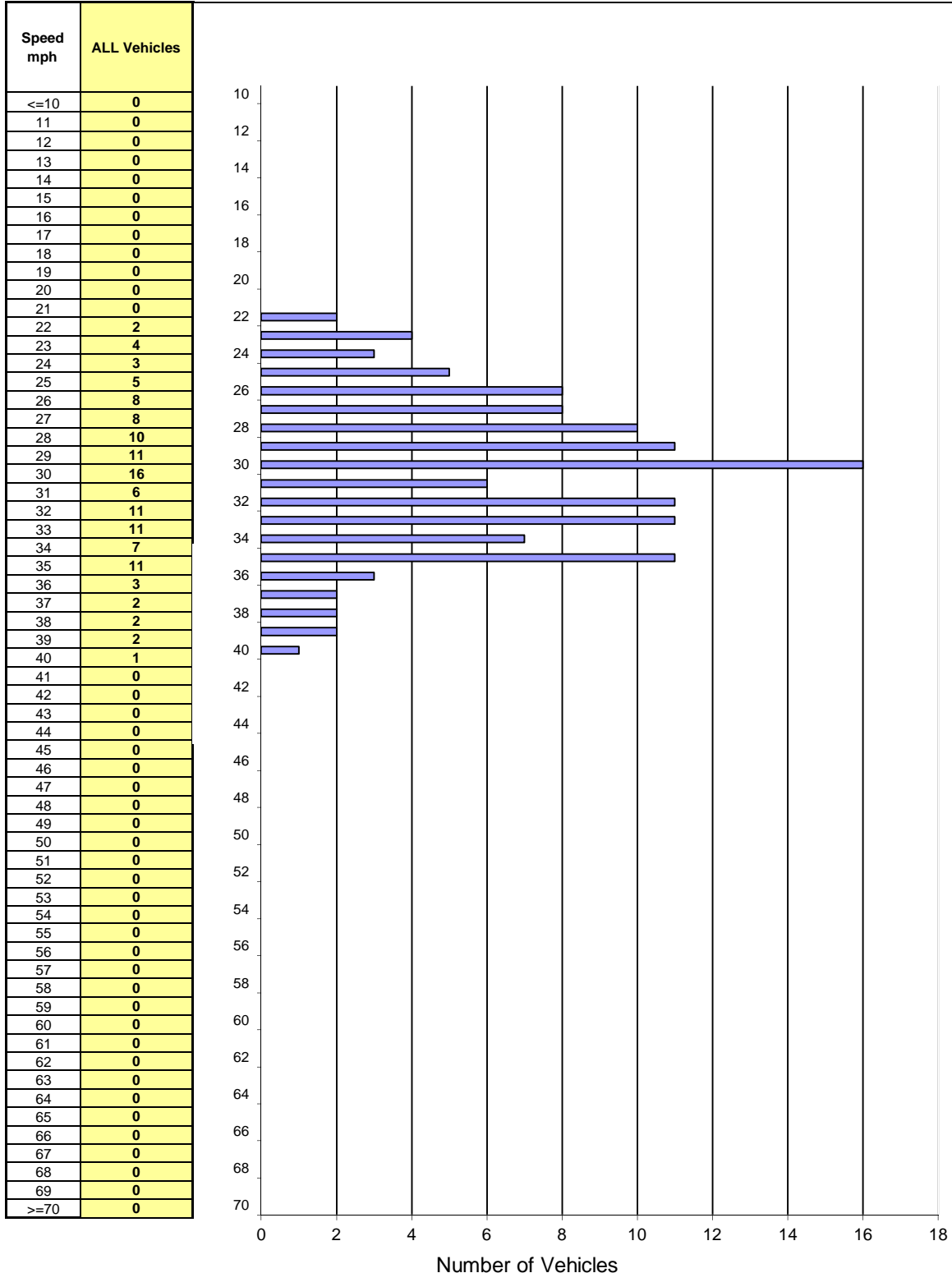
Location: 1930 Cavallo Road

DAY: Monday

Posted Speed: 25 MPH

Project #: 14-7726-010

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	123	22-40	30 mph	35 mph	26 - 35	99	80%	11% / 14	9% / 10

# Spot Speed Study

Segment #11: Cavallo Rd.  
between 18th St. and Wilbur Ave.

City of Antioch

Survey Time: 1020-1110

Street Width: 55 Ft

DATE: 11/10/2014

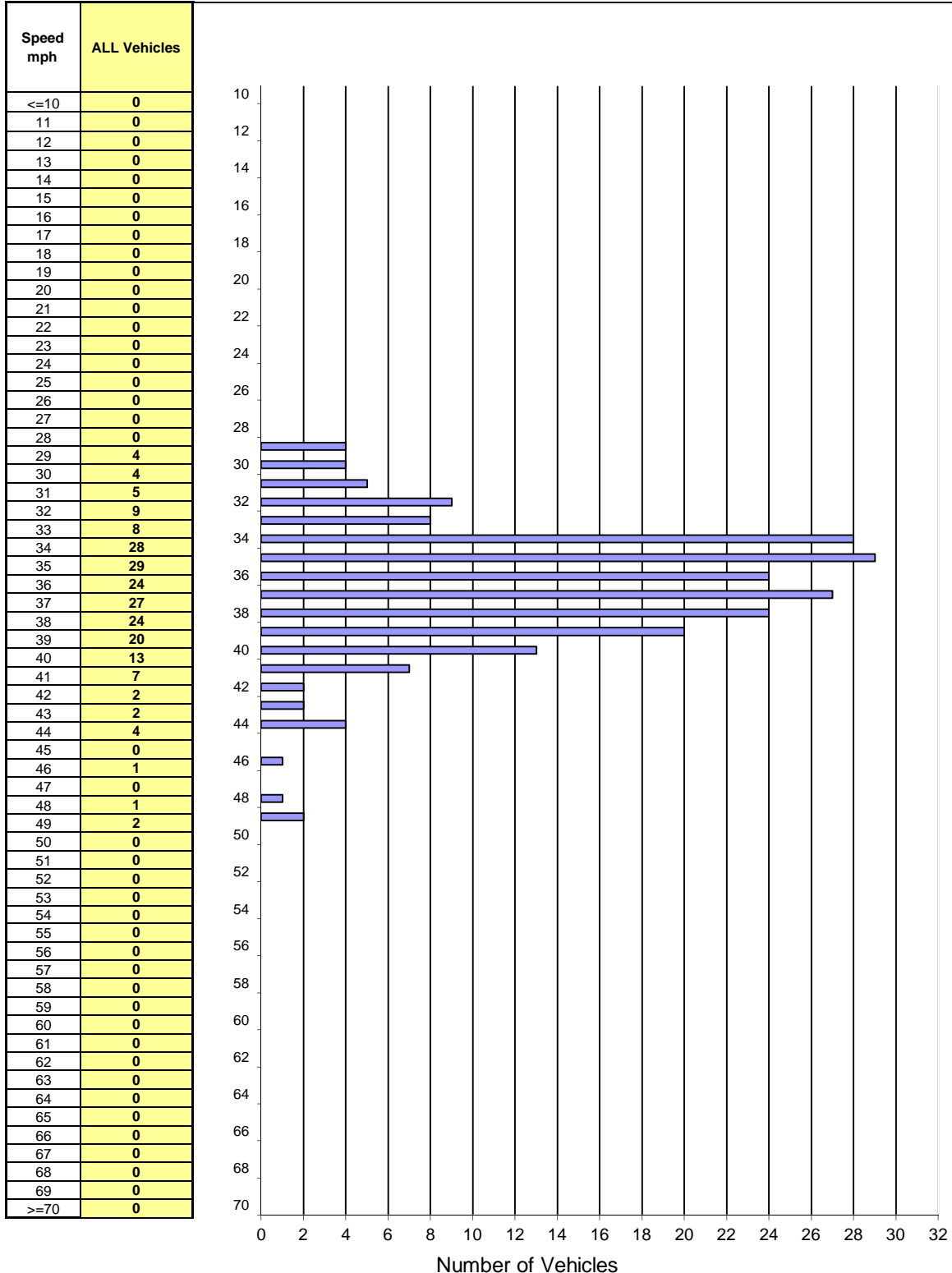
Location: 1625 Cavallo Road

DAY: Monday

Posted Speed: 35 MPH

Project #: 14-7726-011

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	214	29-49	36 mph	39 mph	32 - 41	189	88%	6% / 13	6% / 12

# Spot Speed Study

Segment #12: Contra Loma Blvd.  
between SR-4 and Longview Dr.

City of Antioch

Survey Time: 1015-1045

Street Width: 64 Ft

DATE: 11/14/2014

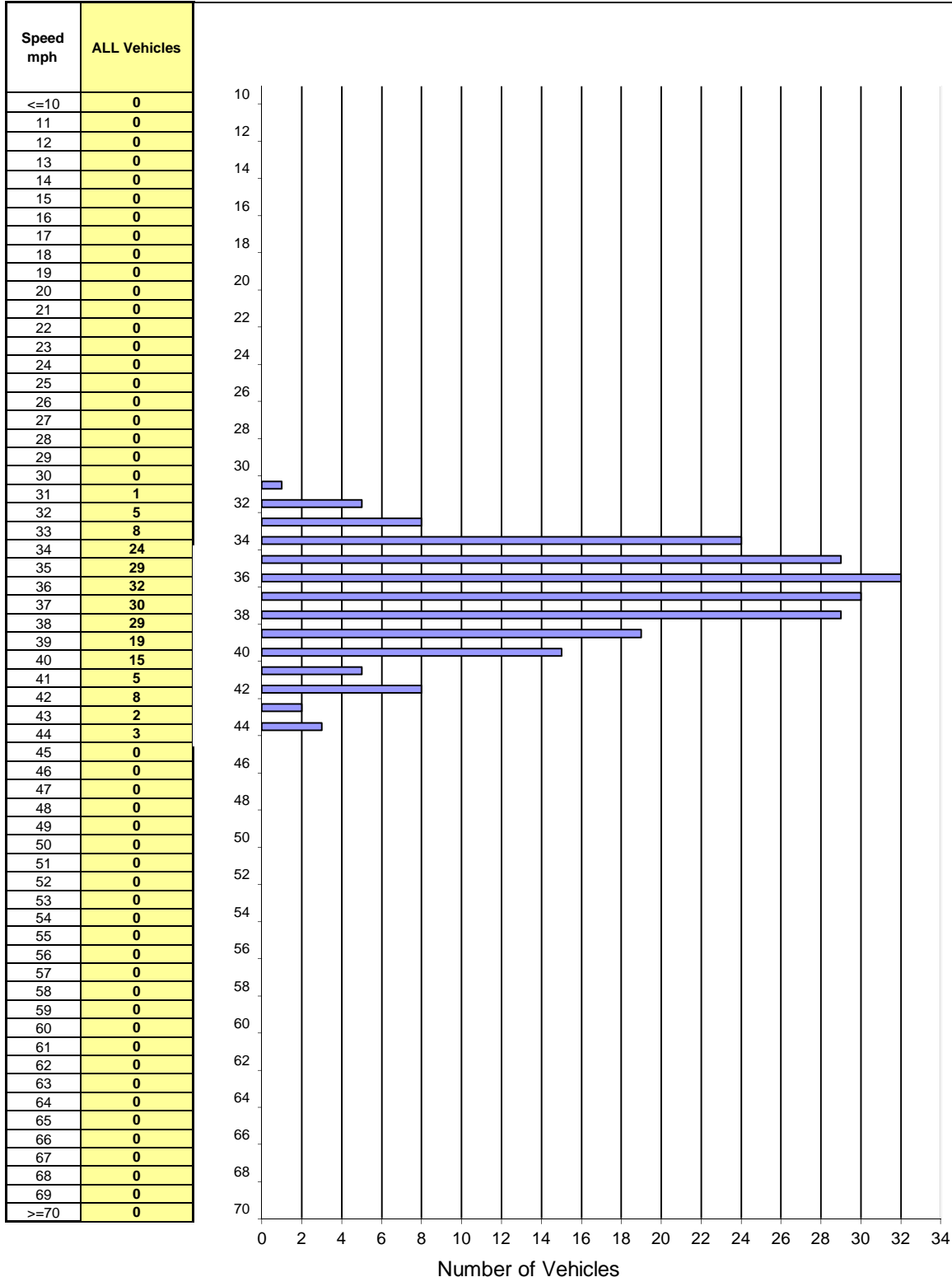
Location: 3019 Contra Loma Boulevard

DAY: Friday

Posted Speed: 35 MPH

Project #: 14-7726-012

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	210	31-44	37 mph	40 mph	33 - 42	199	95%	2% / 6	3% / 5



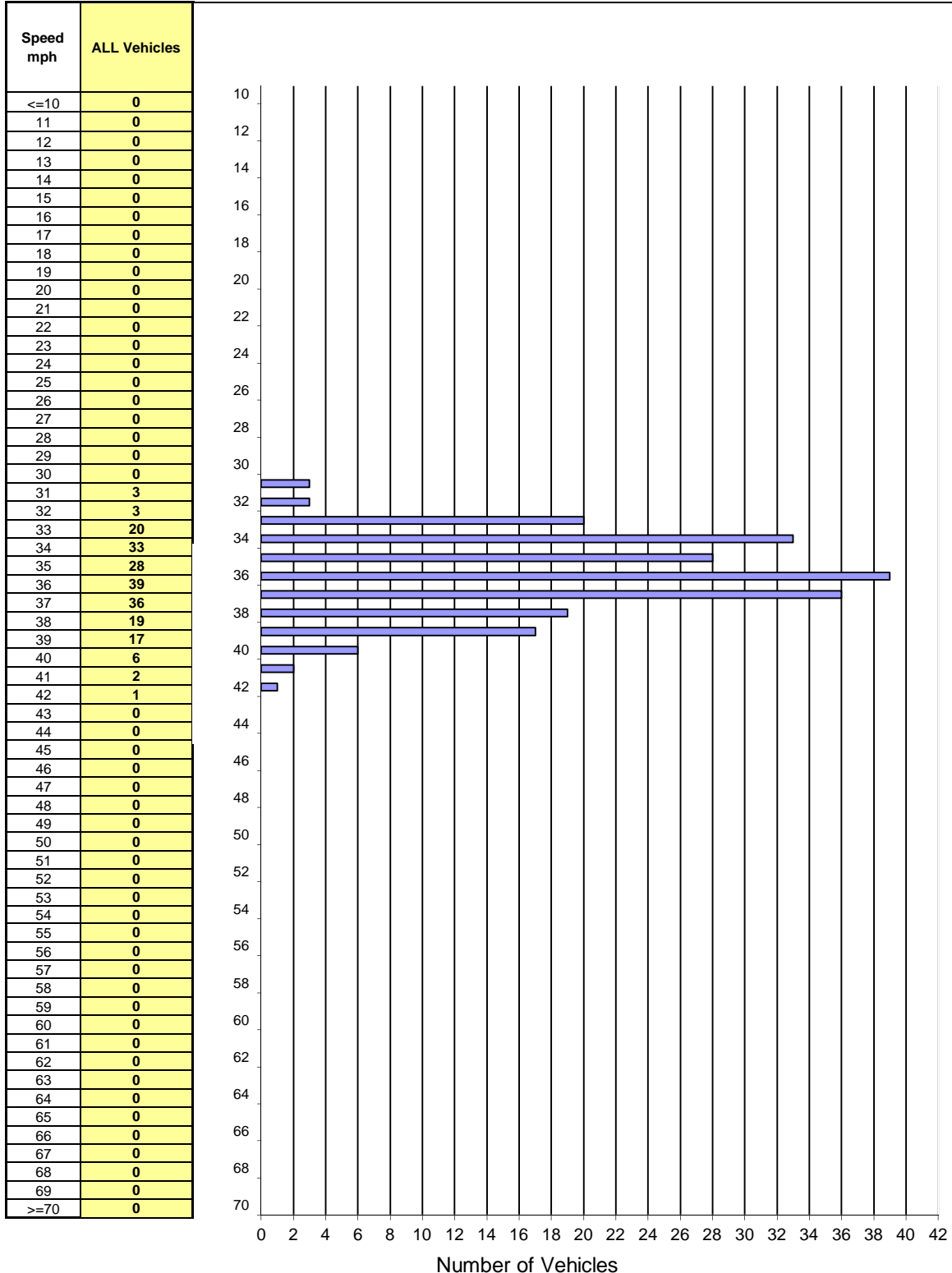
# Spot Speed Study

Segment #13: Contra Loma Blvd.  
between from Longview Dr. and James Donlon Blvd.

City of Antioch

Survey Time: 1310-1410 Street Width: 64 Ft  
DATE: 11/12/2014 Location: 3354 Contra Loma Boulevard  
DAY: Wednesday Posted Speed: 35 MPH Project #: 14-7726-013

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	207	31-42	36 mph	38 mph	31 - 40	204	99%	0% / 0	2% / 3

# Spot Speed Study

Segment #14: Dallas Ranch Rd.  
between Lone Tree Wy. and Mokelomne Dr.

City of Antioch

Survey Time: 1245-1345

Street Width: 62 Ft

DATE: 11/12/2014

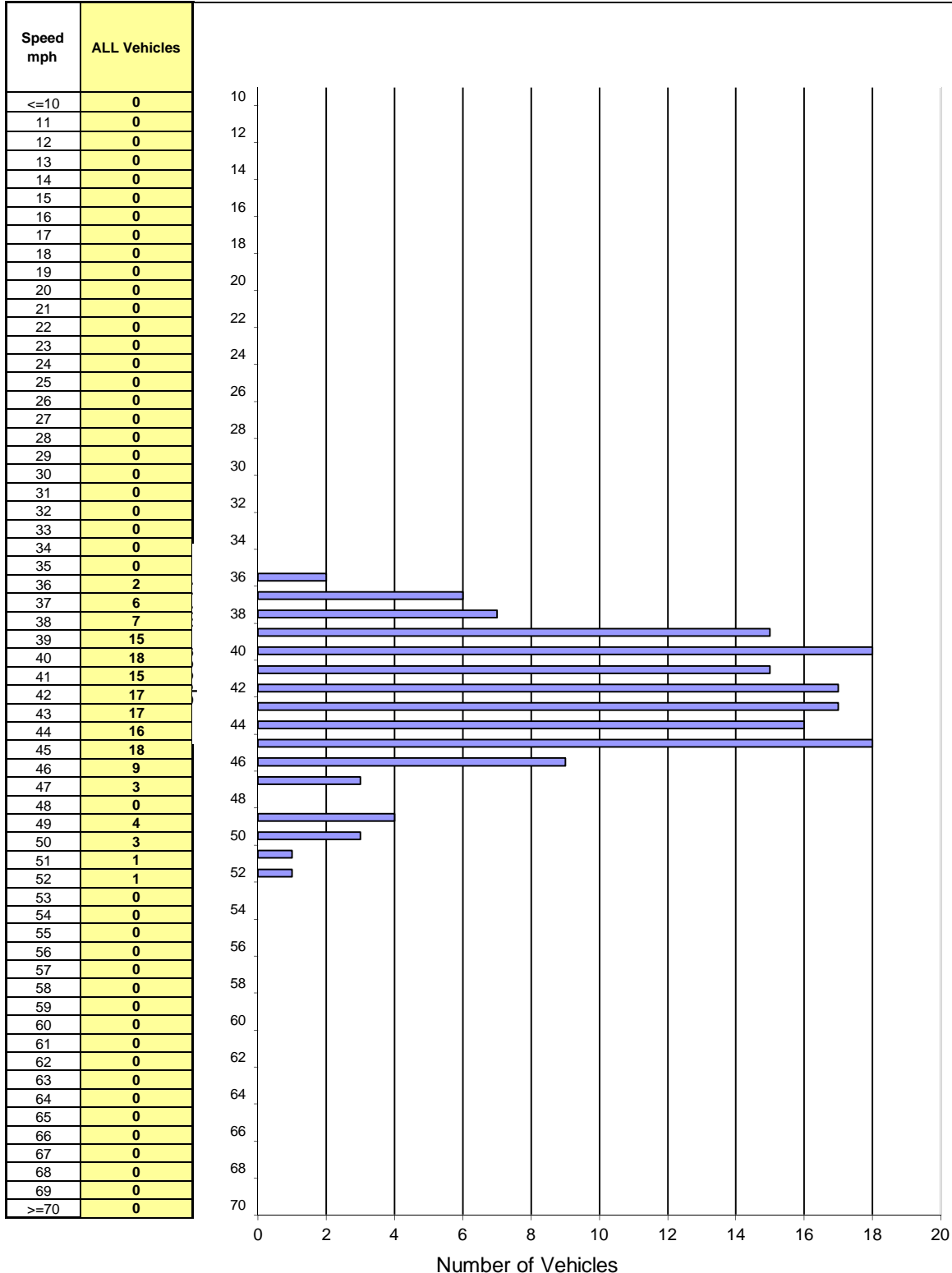
Location: Dallas Ranch Road 350 feet north of Stonecrest Drive

DAY: Monday

Posted Speed: 45 MPH

Project #: 14-7726-014

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	152	36-52	42 mph	45 mph	37 - 46	138	91%	1% / 2	8% / 12

# Spot Speed Study

Segment #15: Davison Dr.  
between Lone Tree Wy. and Hillcrest Ave.

City of Antioch

Survey Time: 1350-1440

Street Width: 55 Ft

DATE: 11/20/2014

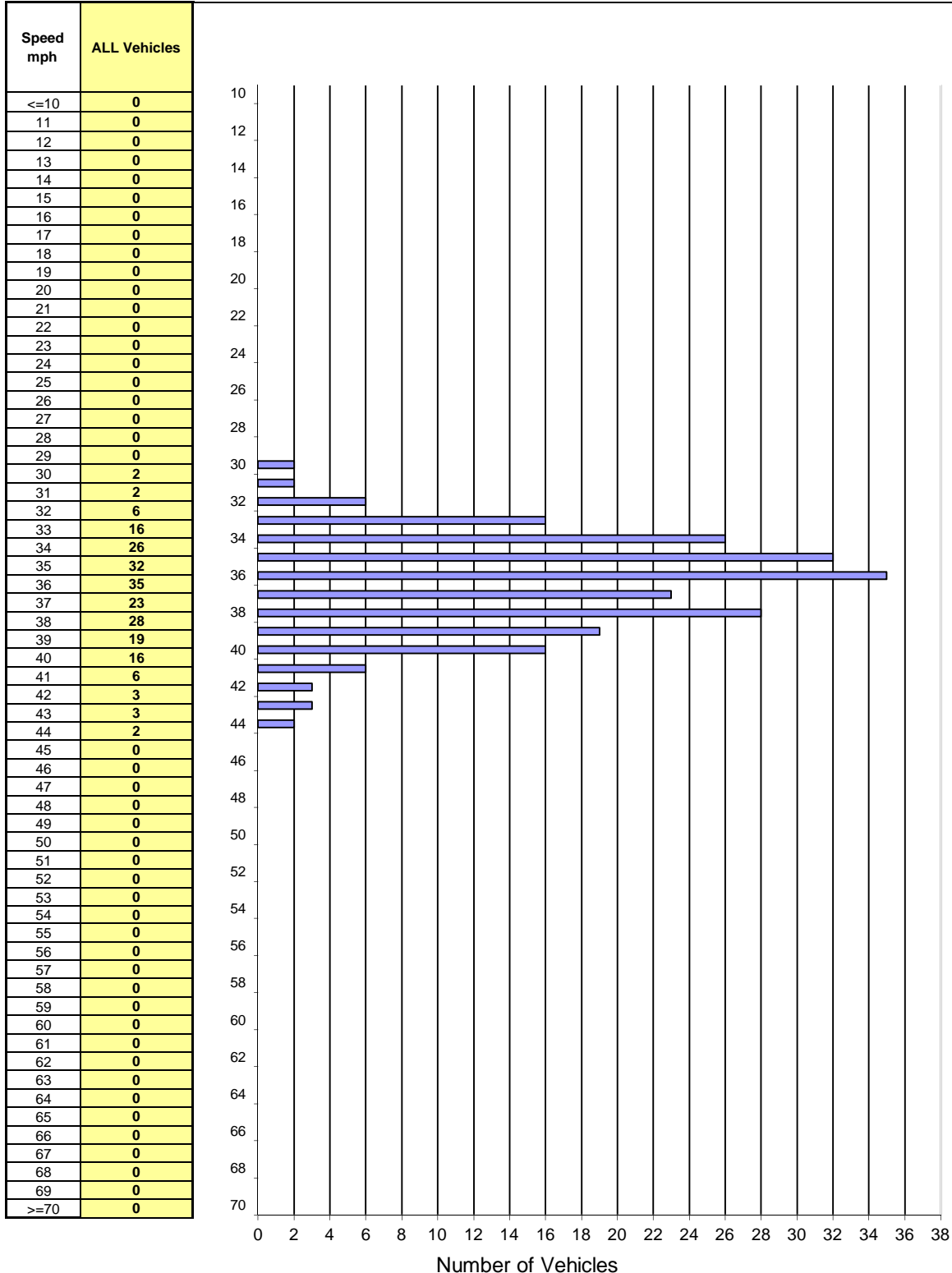
Location: 505 Burwood Way

DAY: Thursday

Posted Speed: 35 MPH

Project #: 14-7726-015

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	219	30-44	36 mph	39 mph	32 - 41	207	95%	1% / 4	4% / 8

# Spot Speed Study

Segment #16: Deer Valley Rd.  
between Hillcrest Ave. and Lone Tree Way.

City of Antioch

Survey Time: 1000-1030

Street Width: 67 Ft

DATE: 11/25/2014

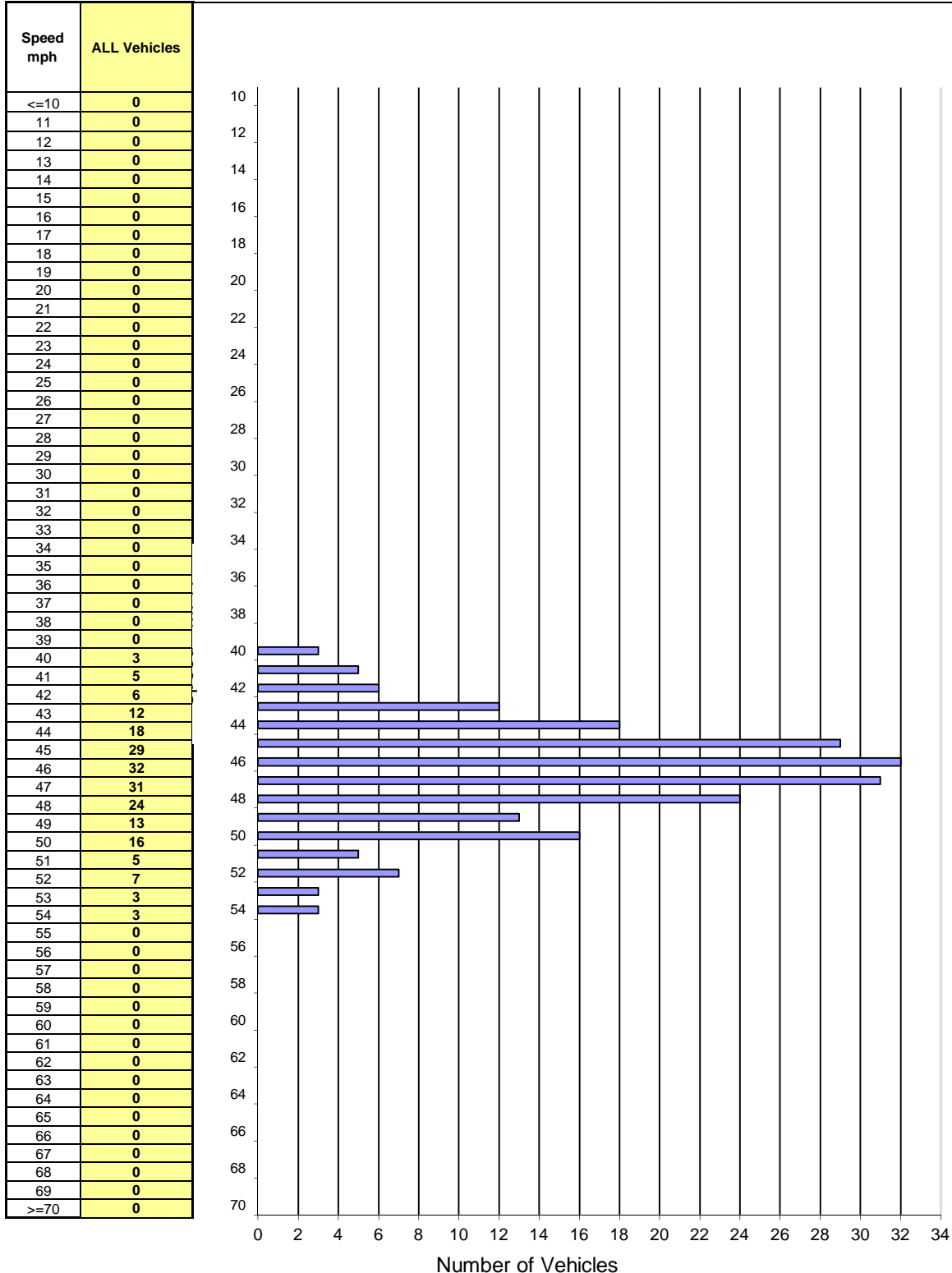
Location: Deer Valley Road 900 feet south of Rocky Point Drive

DAY: Tuesday

Posted Speed: 45 MPH

Project #: 14-7726-016

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	207	40-54	46 mph	50 mph	43 - 52	187	90%	6% / 14	3% / 6

# Spot Speed Study

Segment #17: Deer Valley Rd.  
bwtween Lone Tree Wy. and Mammoth Dr.

City of Antioch

Survey Time: 1045-1125

Street Width: 68 Ft

DATE: 11/25/2014

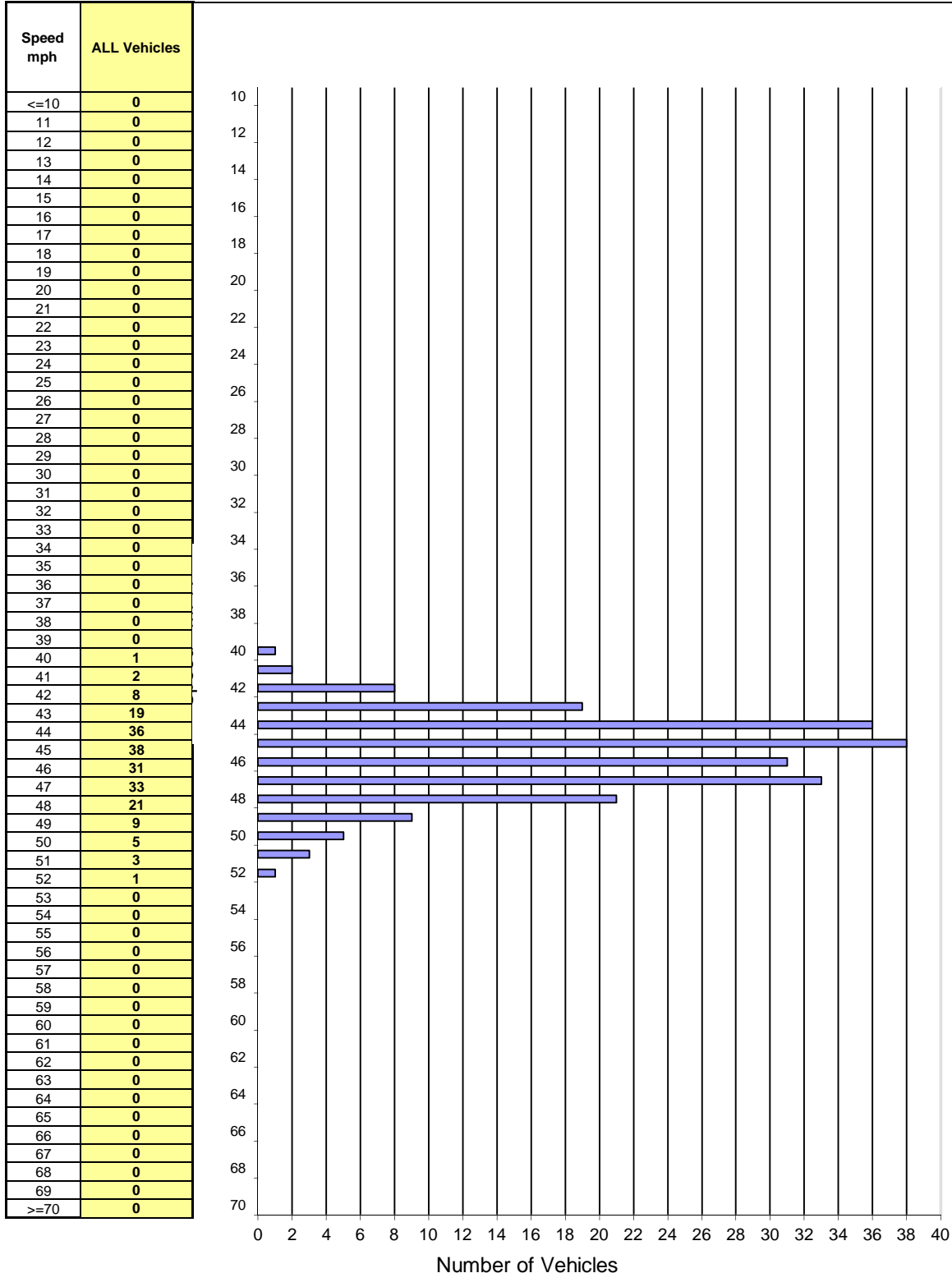
Location: Deer Valley Road 800 feet north of Prewitt Ranch Drive

DAY: Thursday

Posted Speed: 45 MPH

Project #: 14-7726-017

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	207	40-52	45 mph	48 mph	42 - 51	203	98%	1% / 3	1% / 1

# Spot Speed Study

Segment #18: Deer Valley Rd.  
between Mammoth Dr. and City Limits

City of Antioch

Survey Time: 1400-1450

Street Width: 19 Ft

DATE: 11/17/2014

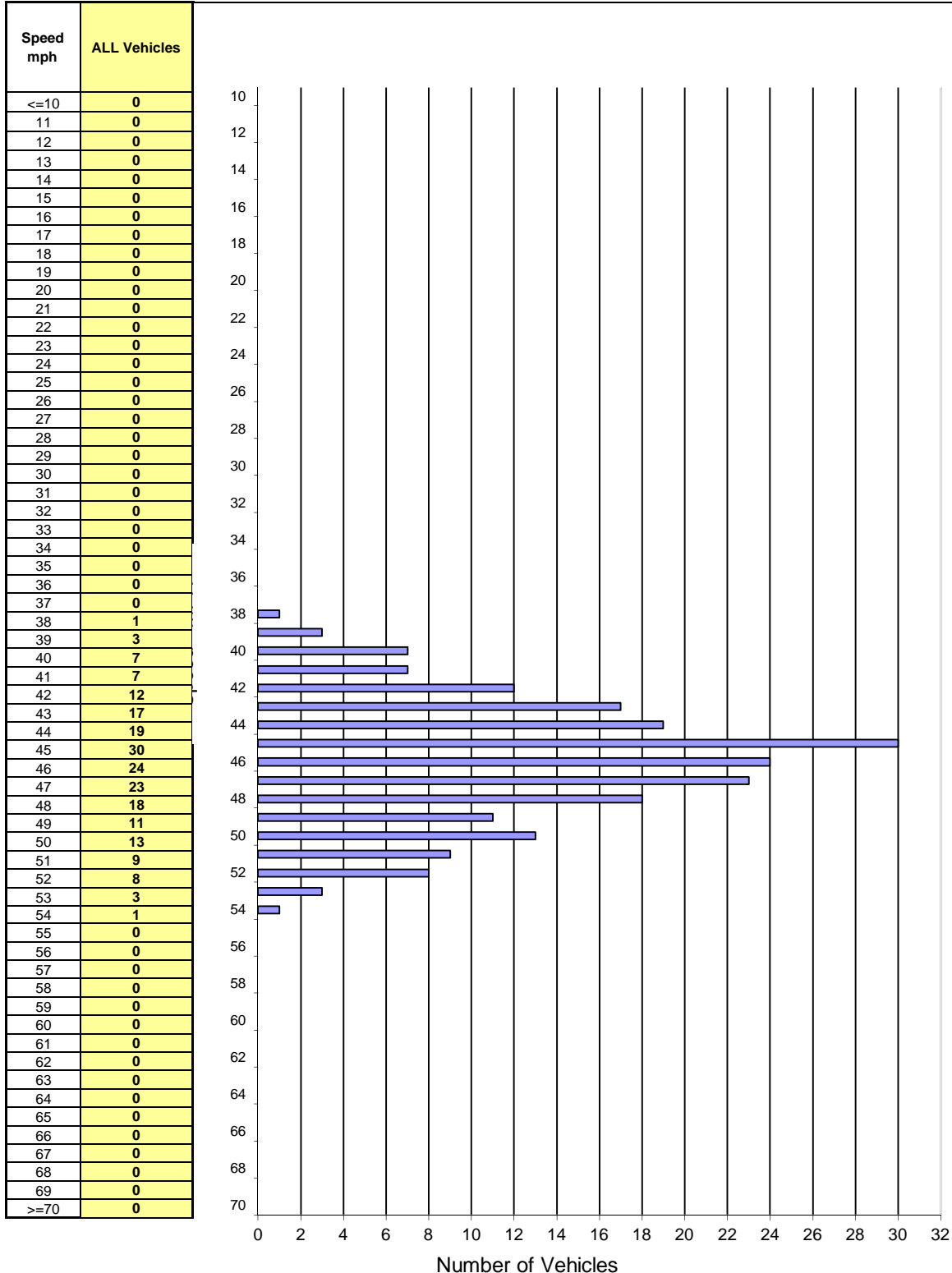
Location: 6801 Deer Valley Road

DAY: Monday

Posted Speed: 45 MPH

Project #: 14-7726-018

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	206	38-54	46 mph	50 mph	42 - 51	176	85%	8% / 18	6% / 12

# Spot Speed Study

Segment #19: Delta Fair Blvd.  
between City Limits and Belle Dr.

City of Antioch

Survey Time: 0900-9040

Street Width: 56 Ft

DATE: 11/21/2014

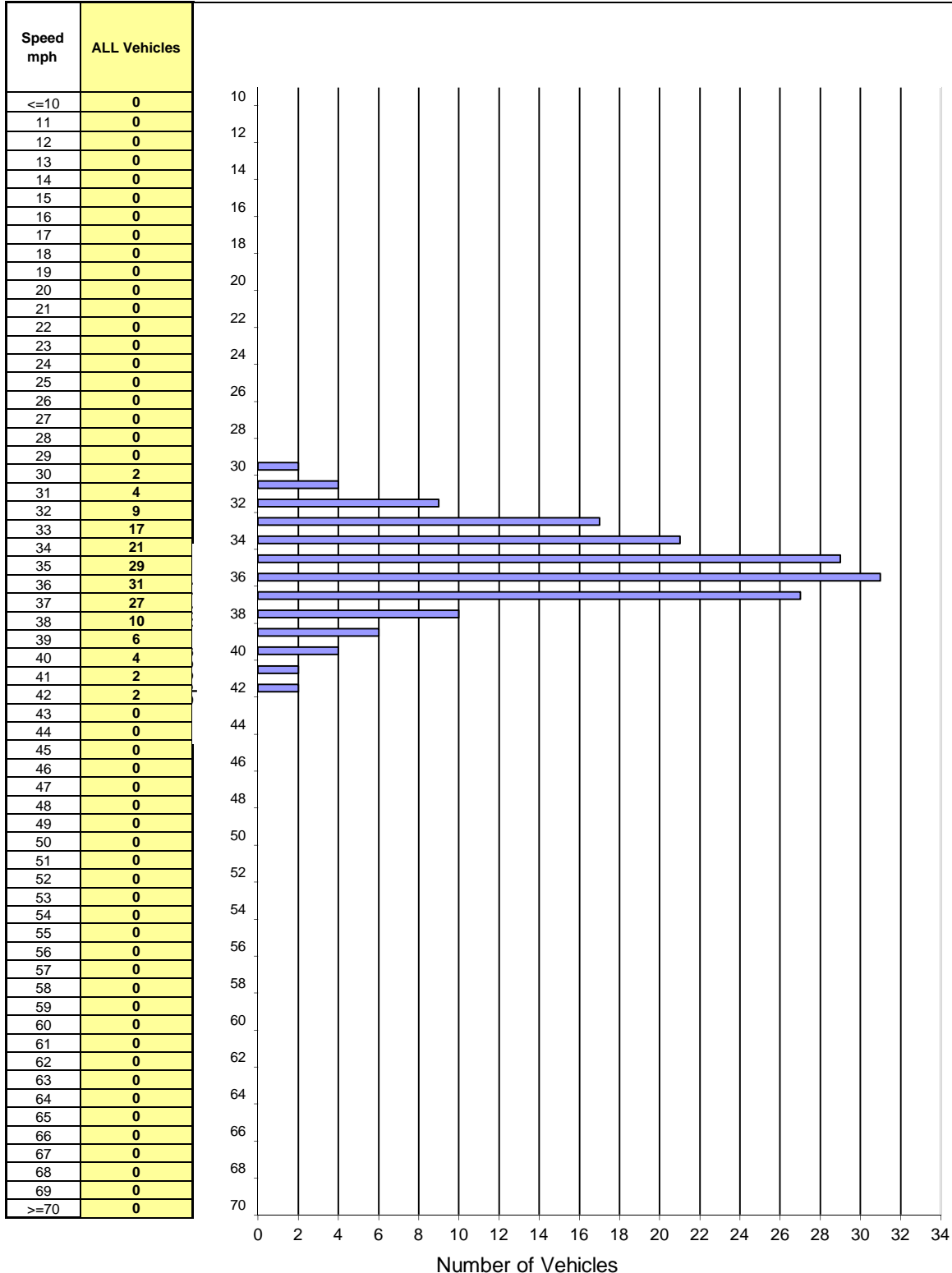
Location: 4545 Delta Fair Boulevard

DAY: Friday

Posted Speed: 35 MPH

Project #: 14-7726-019

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	164	30-44	35 mph	37 mph	31 - 40	158	96%	1% / 2	3% / 4

# Spot Speed Study

Segment #20: Delta Fair Blvd.  
between Belle Dr. to Kendree St.

City of Antioch

Survey Time: 0950-1020

Street Width: 52 Ft

DATE: 11/21/2014

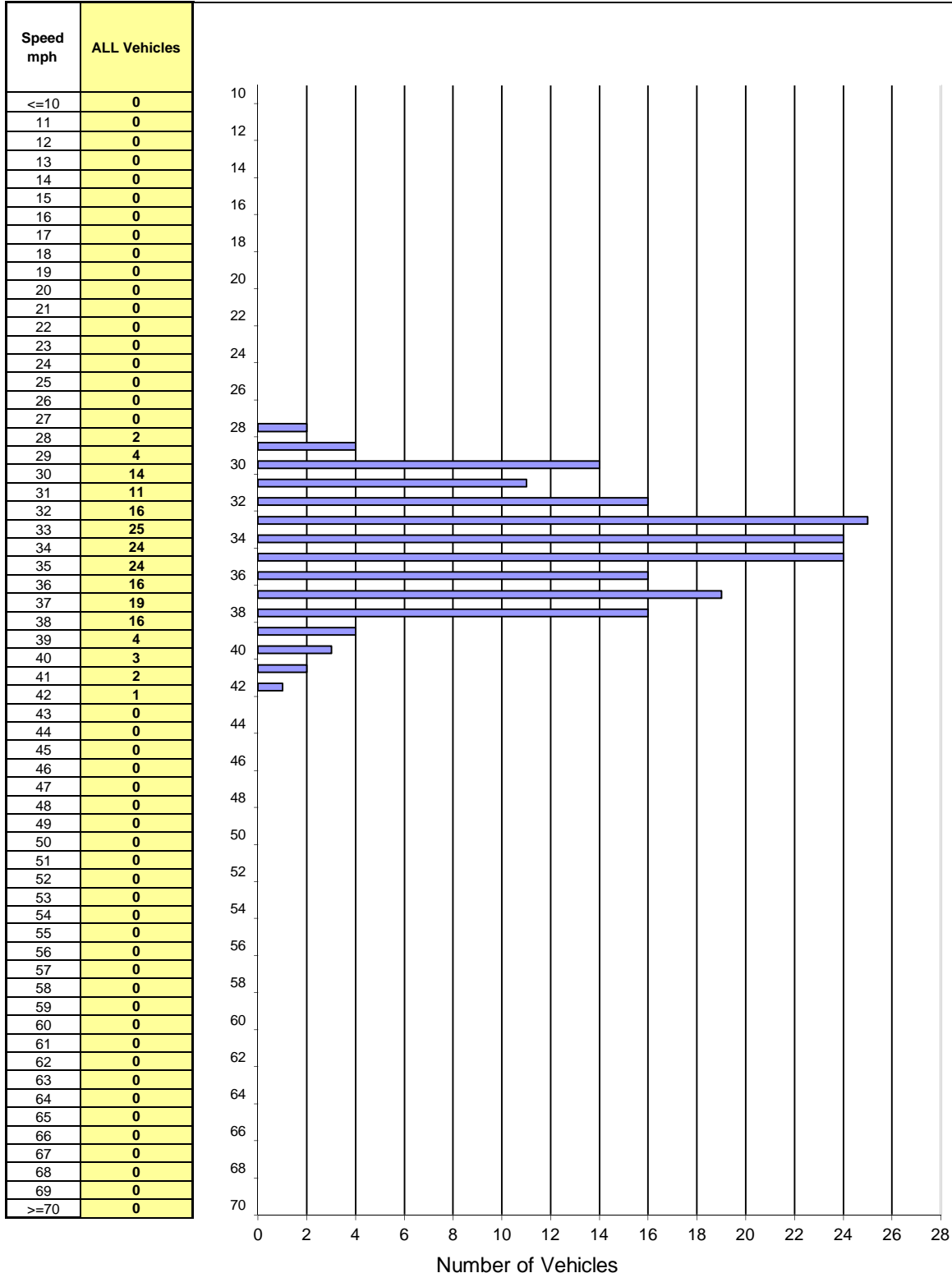
Location: 4325 Delta Fair Boulevard

DAY: Friday

Posted Speed: 30 MPH

Project #: 14-7726-020

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	181	28-44	34 mph	37 mph	29 - 38	169	93%	1% / 2	6% / 10



# Spot Speed Study

Segment #21: Delta Fair Blvd.  
between Kendree St. to Somersville Rd.

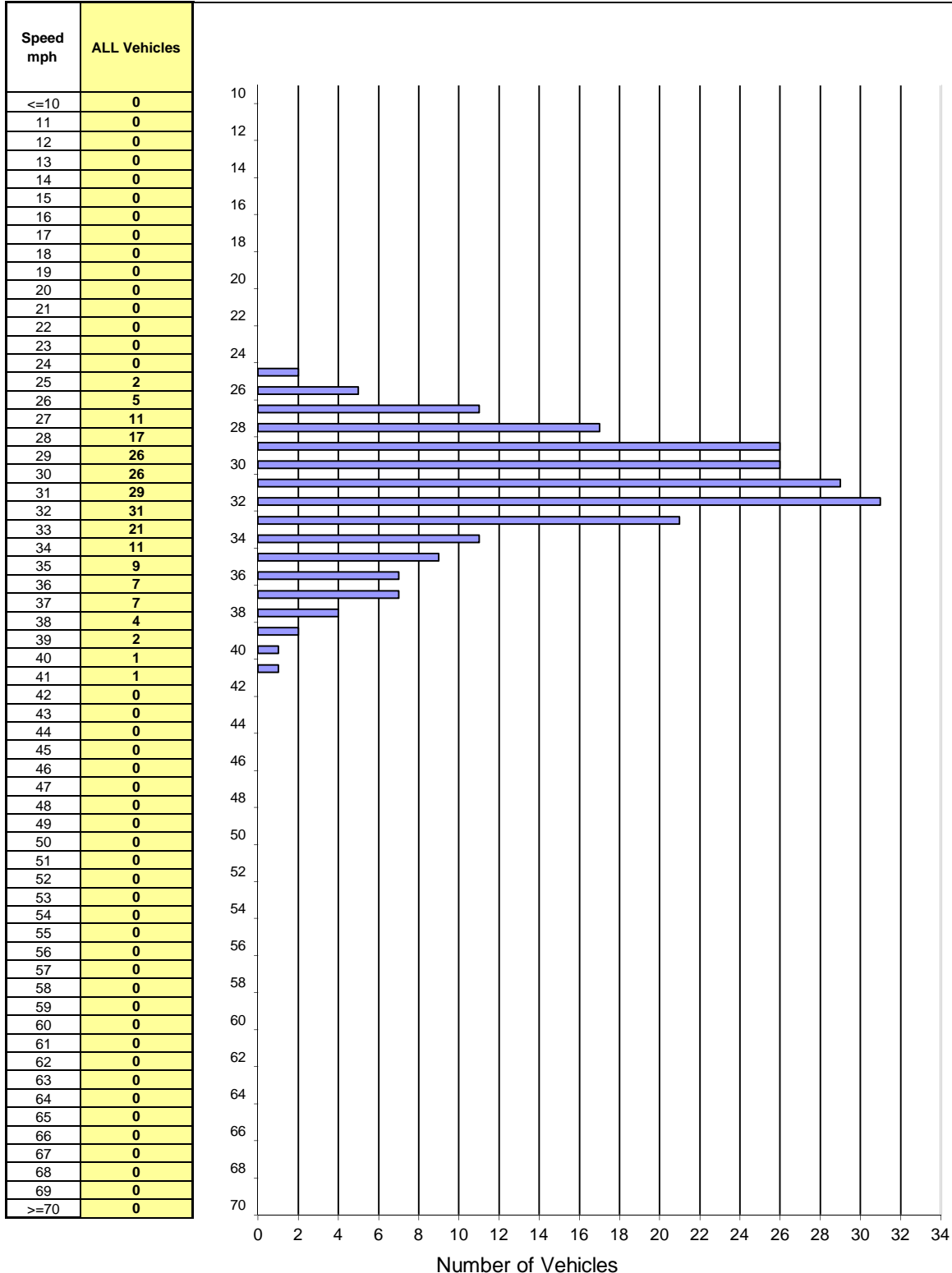
City of Antioch

Survey Time: 1035-1100  
DATE: 11/21/2014  
DAY: Friday

Street Width: 56 Ft  
Location: 3486 Delta Fair Boulevard  
Posted Speed: 30 MPH

Project #: 14-7726-021

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	210	25-41	31 mph	34 mph	27 - 36	188	90%	3% / 7	8% / 15

# Spot Speed Study

Segment #22: Delta Fair Blvd.  
between Somersville Rd. to Buchanan Rd.

City of Antioch

Survey Time: 1055-1135

Street Width: 60 Ft

DATE: 11/21/2014

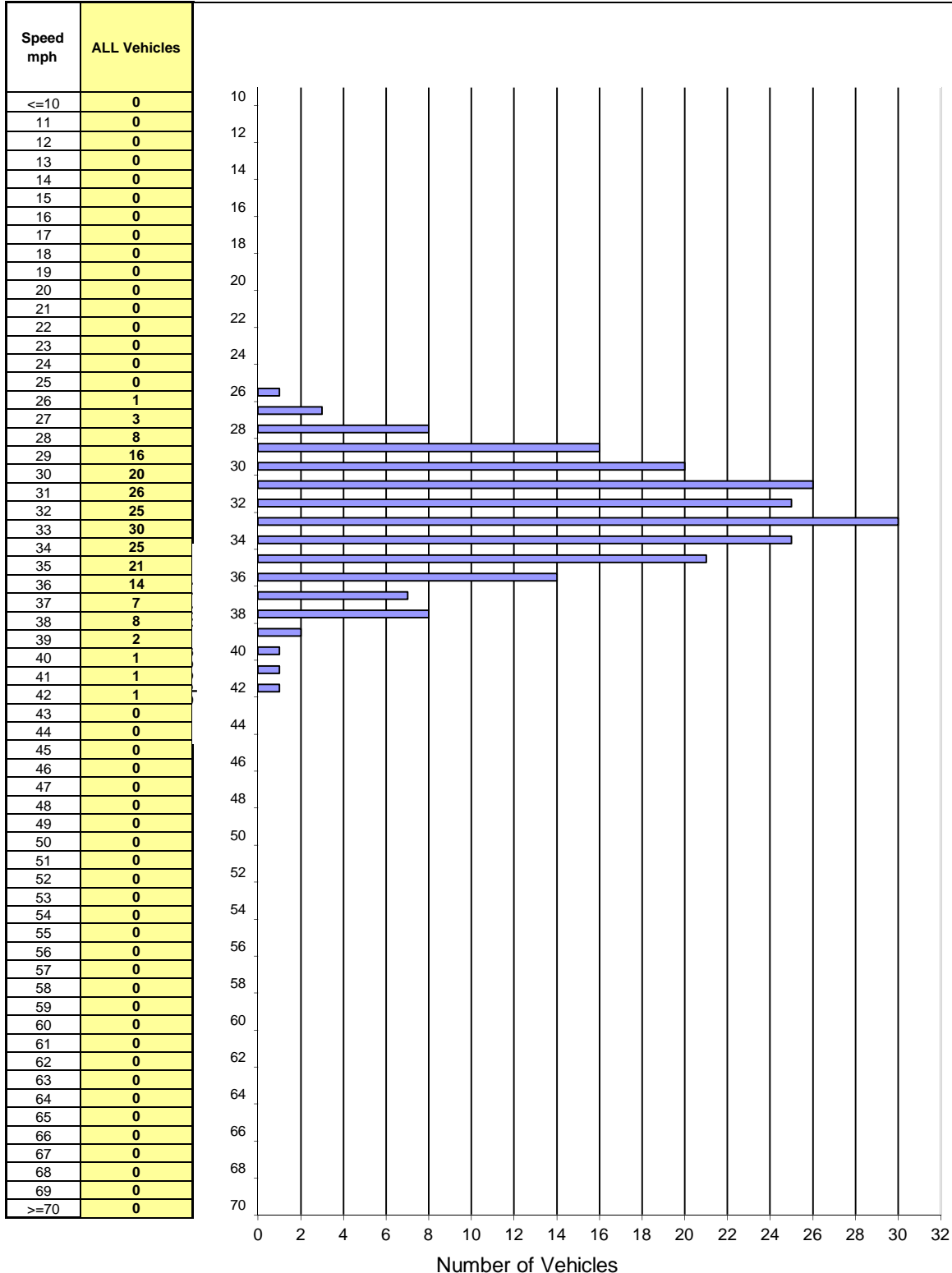
Location: Delta Fair Boulevard 400 feet south of San Jose Drive

DAY: Friday

Posted Speed: 30 MPH

Project #: 14-7726-022

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	209	26-42	33 mph	36 mph	28 - 37	192	92%	1% / 4	7% / 13

# Spot Speed Study

Segment #23: E. 18th St.  
between A St. and Cavallo Rd.

City of Antioch

Survey Time: 1410-1510

Street Width: 60 Ft

DATE: 11/7/2014

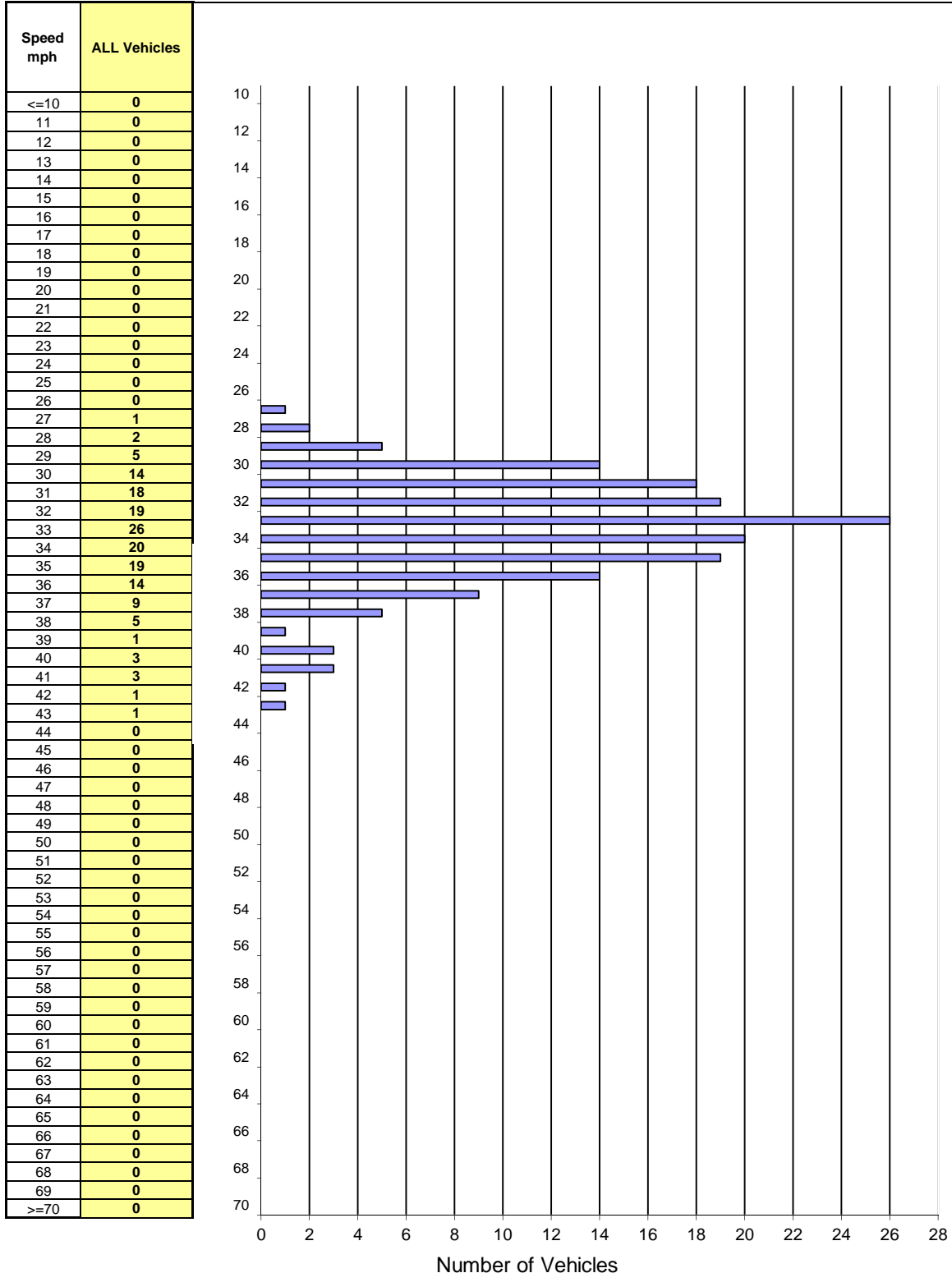
Location: 34 East 18th Street

DAY: Friday

Posted Speed: 30 MPH

Project #: 14-7726-023

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	161	27-43	33 mph	36 mph	29 - 38	149	93%	1% / 3	6% / 9

# Spot Speed Study

Segment #24: E. 18th St.  
between Cavallo Rd. to Hillcrest Ave.

City of Antioch

Survey Time: 1130-1205

Street Width: 61 Ft

DATE: 11/10/2014

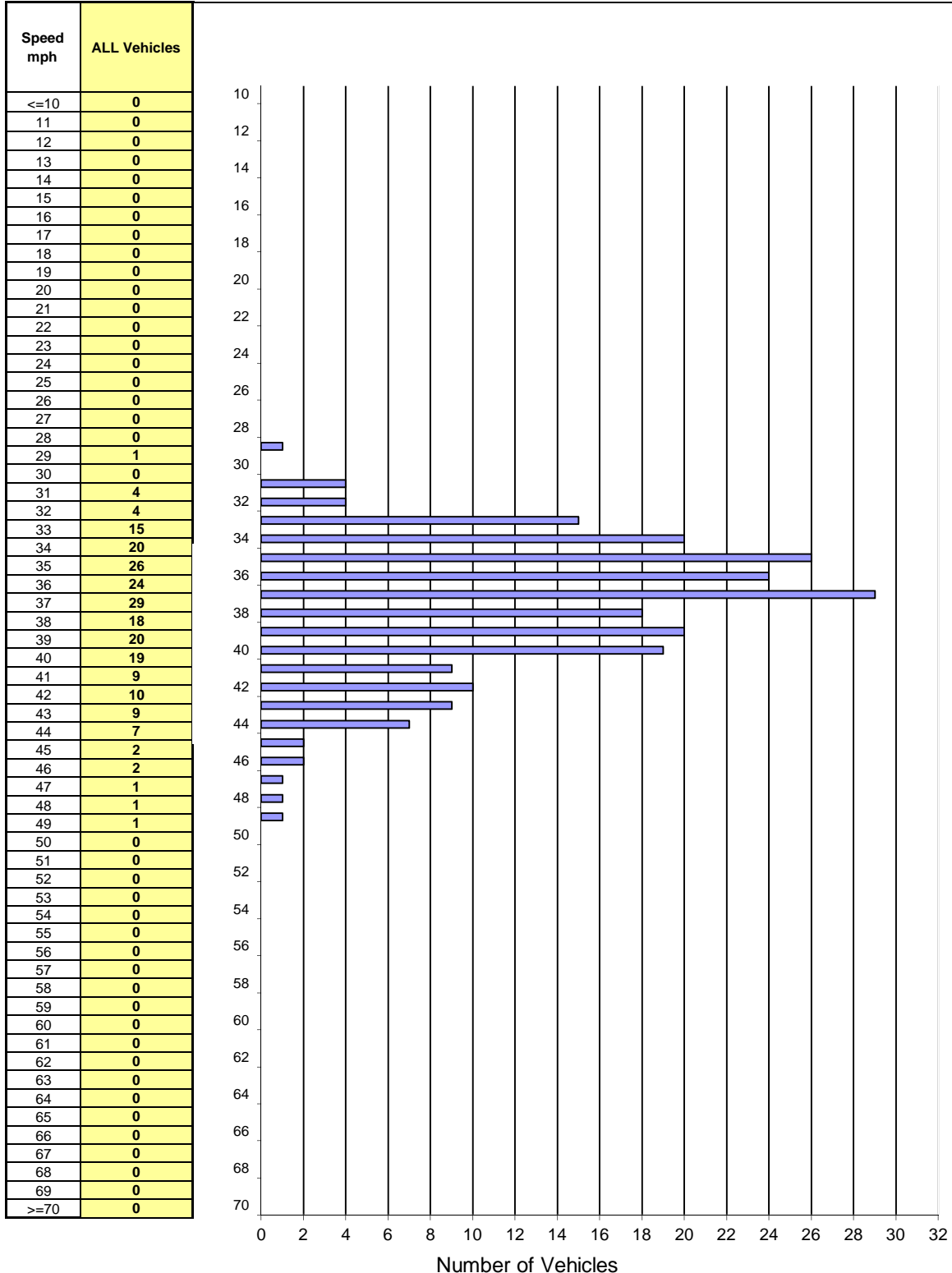
Location: 1721 E. 18th Street

DAY: Monday

Posted Speed: 35 MPH

Project #: 14-7726-024

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	222	29-49	37 mph	41 mph	33 - 42	190	86%	4% / 9	11% / 23

# Spot Speed Study

Segment #25: E. 18th St.  
between Hillcrest Ave. and City Limits

City of Antioch

Survey Time: 0900-0935

Street Width: 58Ft

DATE: 11/4/2014

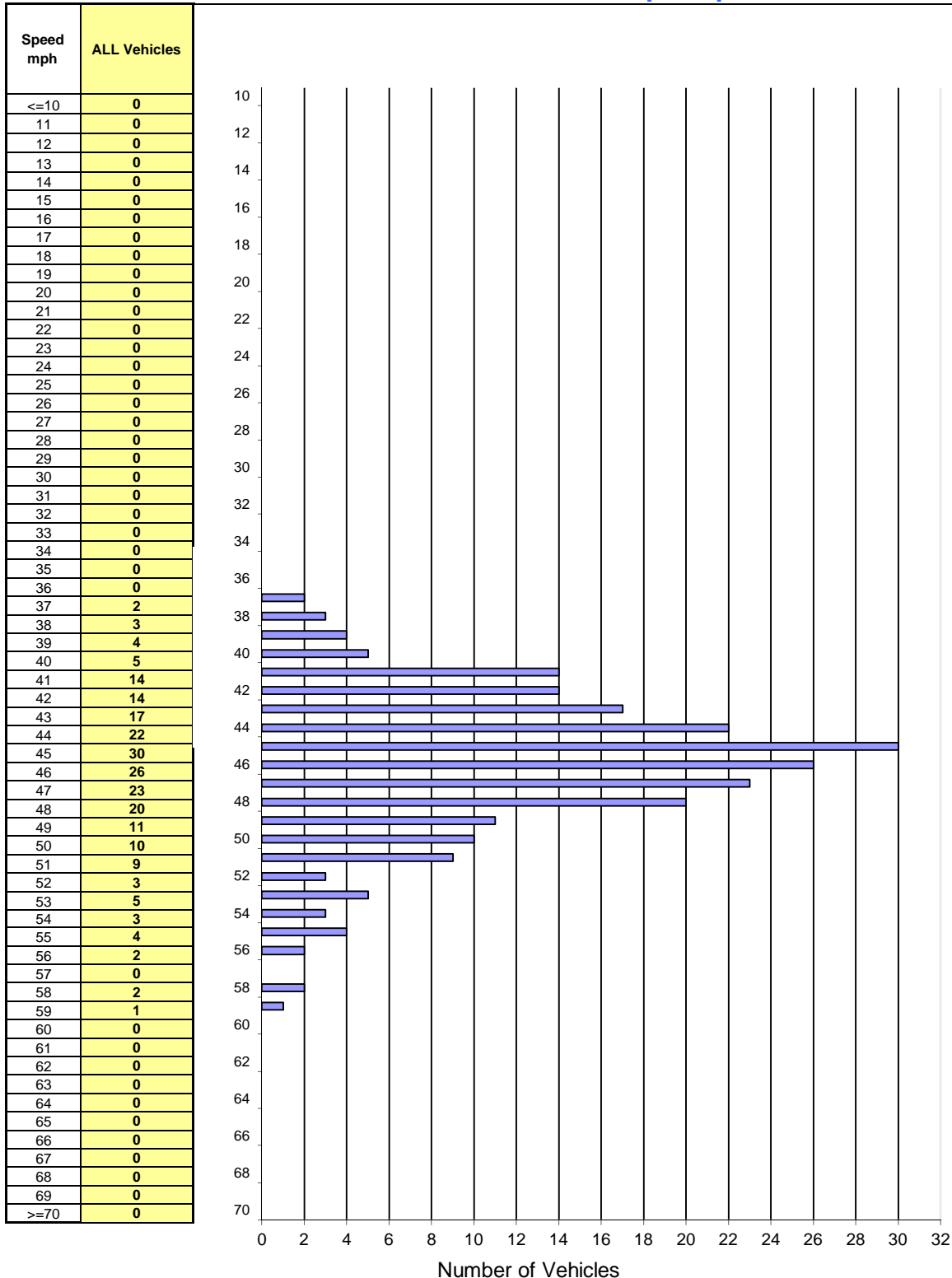
Location: 3022 E. 18th Street

DAY: Tuesday

Posted Speed: 45 MPH

Project #: 14-7726-025

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	230	37-59	46 mph	50 mph	41 - 50	187	81%	6% / 14	13% / 29

# Spot Speed Study

Segment #26: Fitzuren Rd.  
between G St. to Contra Loma Blvd.

City of Antioch

Survey Time: 1315-1345

Street Width: 28 Ft

DATE: 11/7/2014

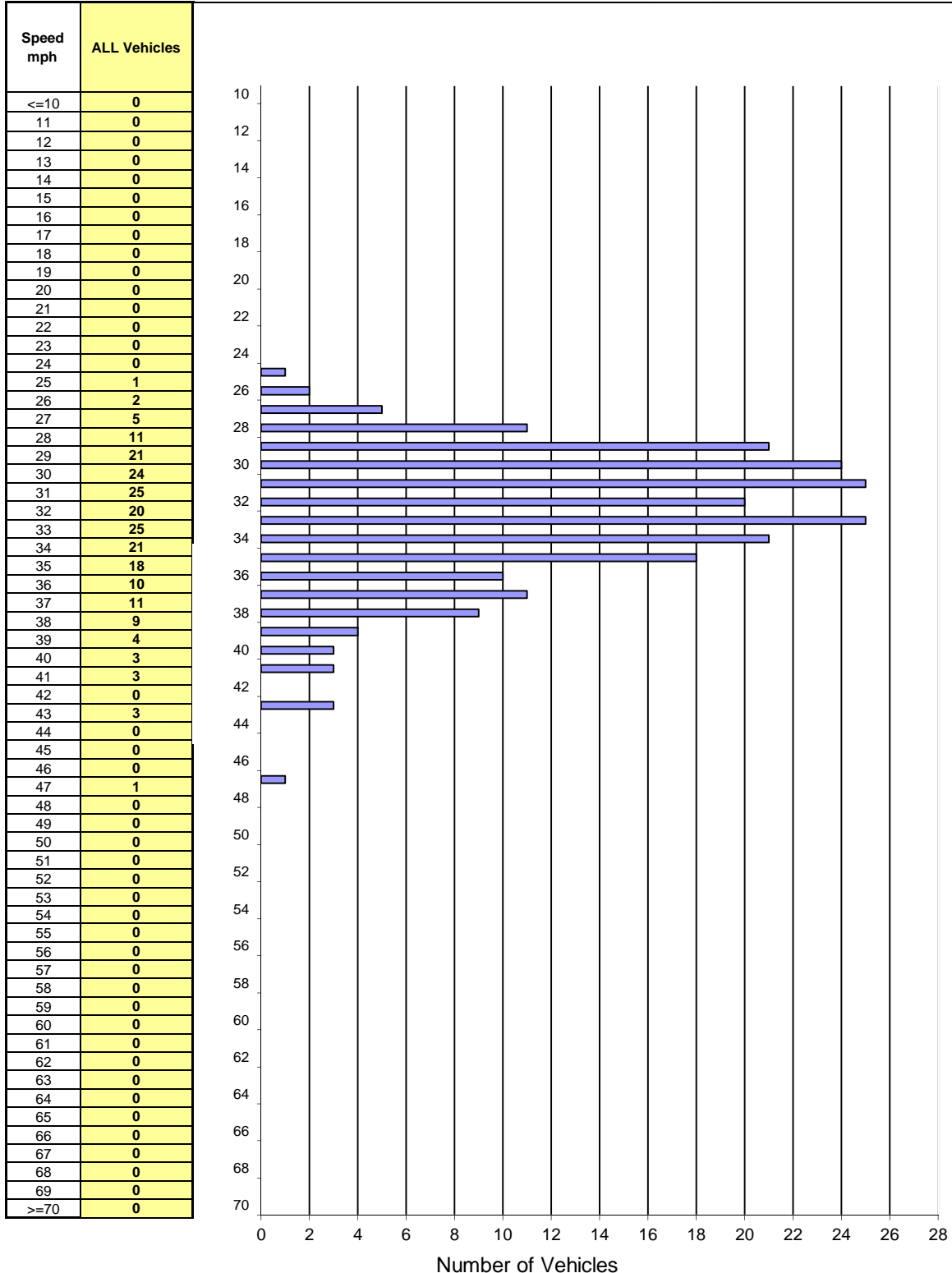
Location: 995 Fitzuren Road

DAY: Friday

Posted Speed: 30 MPH

Project #: 14-7726-026

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	217	25-47	32 mph	37 mph	28 - 37	186	86%	3% / 8	11% / 23

# Spot Speed Study

Segment #27: W. 4th St.  
between Somersville Rd. to L St.

City of Antioch

Survey Time: 1115-1215

Street Width: 65 Ft

DATE: 11/5/2014

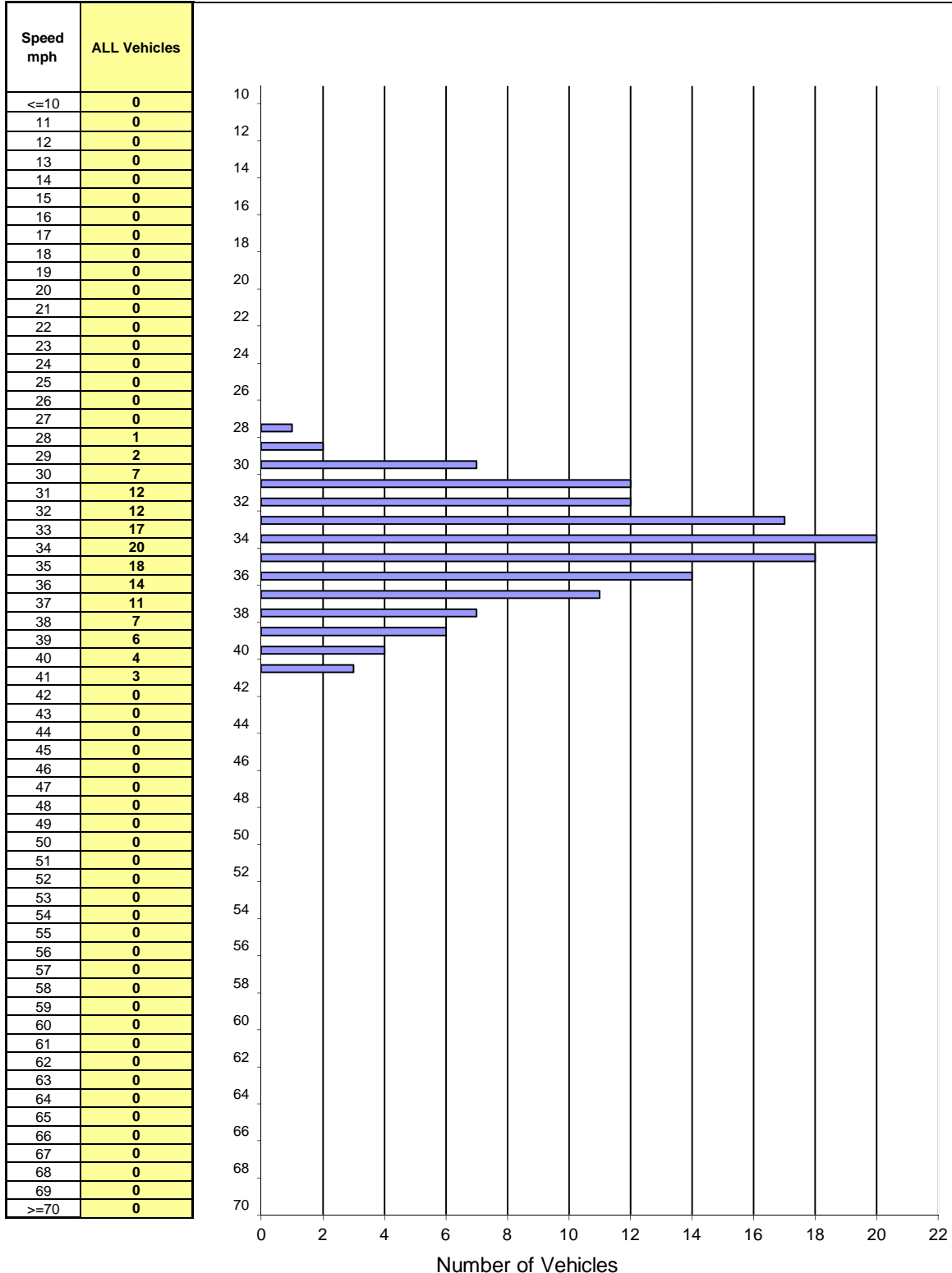
Location: 1300 W. 4th Street

DAY: Wednesday

Posted Speed: 35 MPH

Project #: 14-7726-027

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	134	28-48	34 mph	37 mph	30 - 39	124	93%	2% / 3	6% / 7

# Spot Speed Study

Segment #28: W. 4th St.  
between L St. to C St.

City of Antioch

Survey Time: 1225-1350

Street Width: 35 Ft

DATE: 11/5/2014

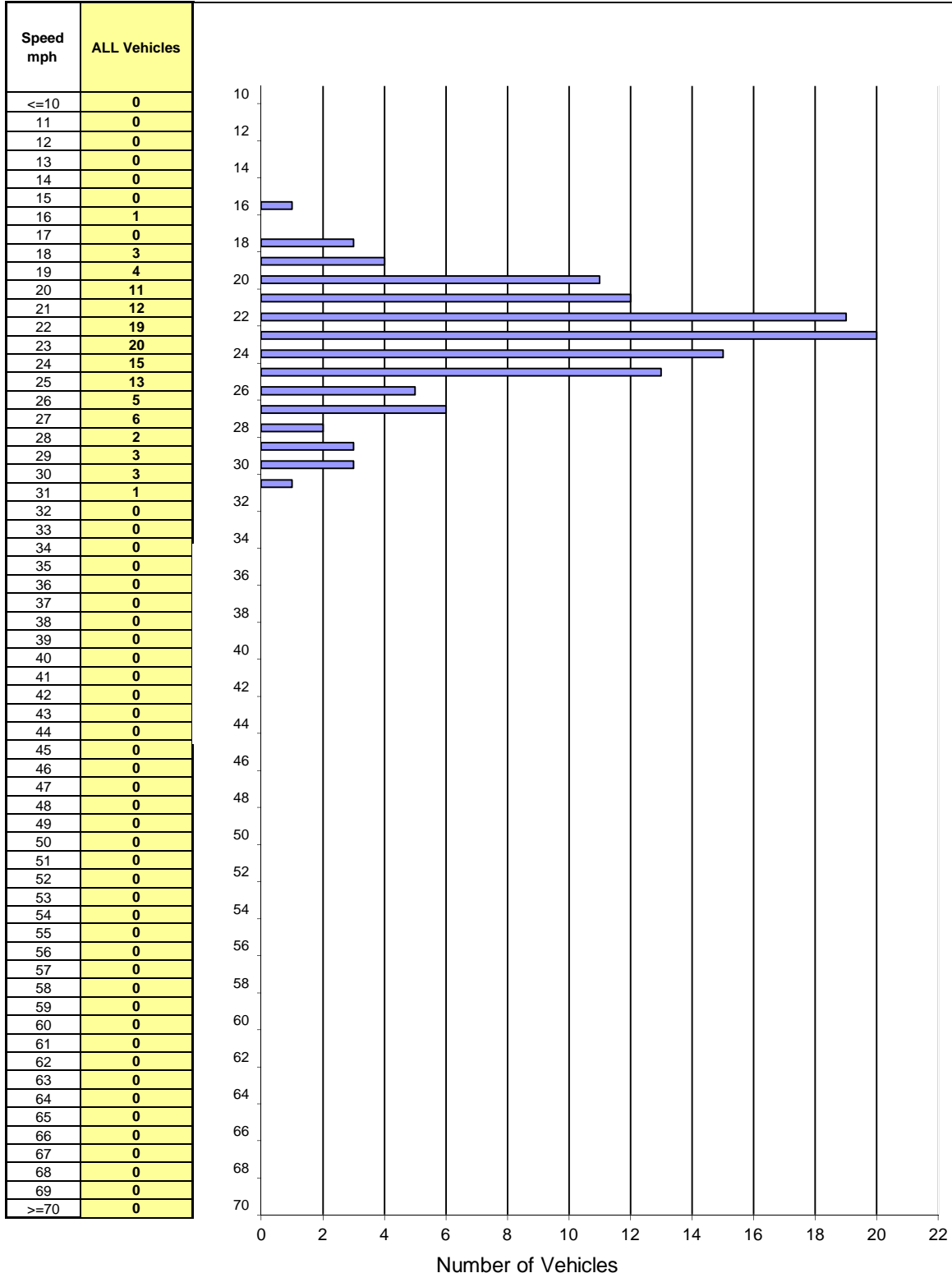
Location: 608 W. 4th Street

DAY: Wednesday

Posted Speed: 25 MPH

Project #: 14-7726-028

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	118	16-31	23 mph	26 mph	18 - 27	108	92%	0% / 1	8% / 9



# Spot Speed Study

Segment #29: G St.  
from 2nd St. to W. Tregallas Rd.

City of Antioch

Survey Time: 1435-1535

Street Width: 35 Ft

DATE: 11/10/2014

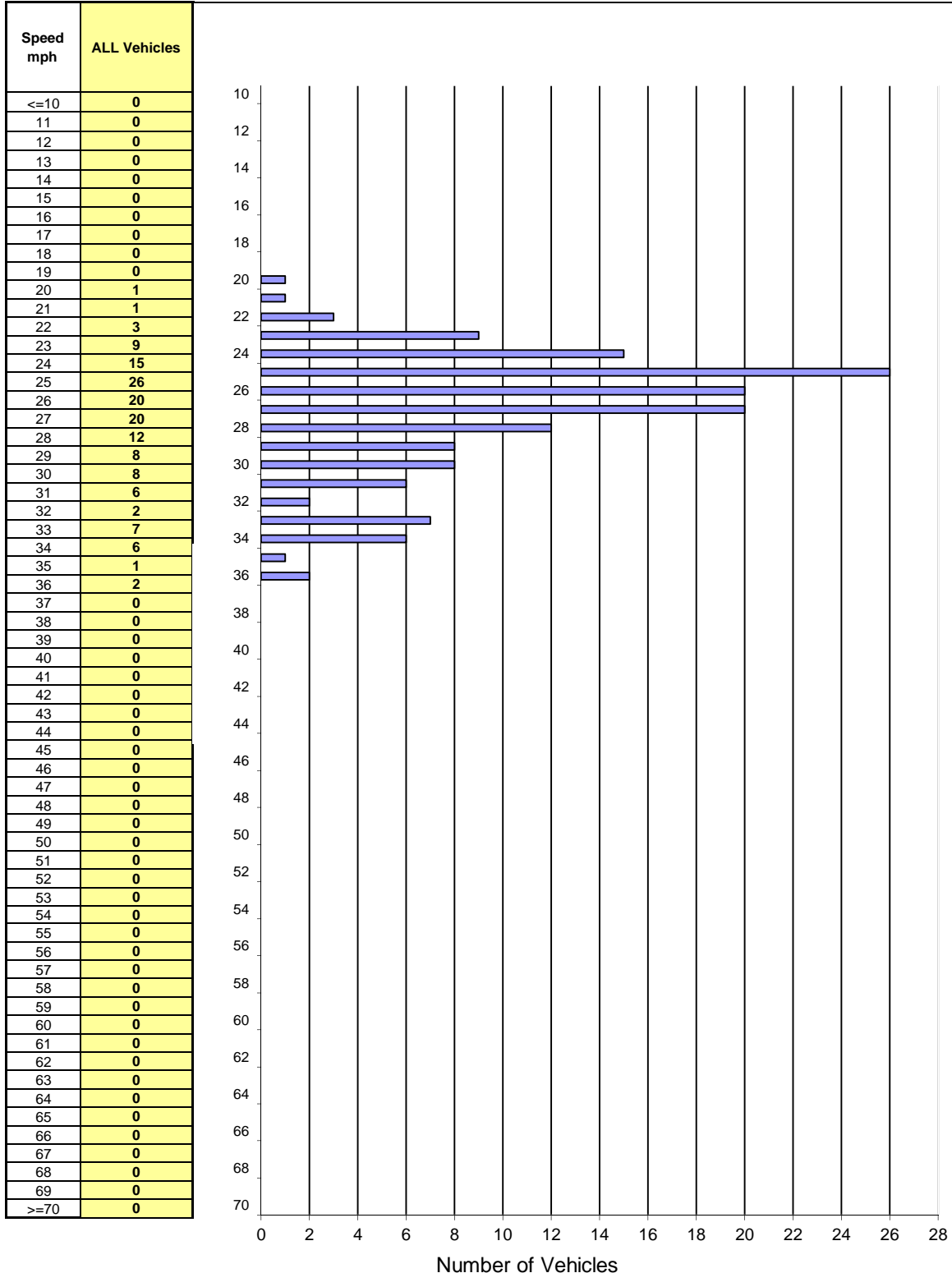
Location: 2317 G Street

DAY: Monday

Posted Speed: 25 MPH

Project #: 14-7726-029

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	147	20-36	26 mph	31 mph	22 - 31	127	86%	1% / 2	13% / 18

# Spot Speed Study

Segment #30: G St.  
between Putnam St. and James Donlon Blvd.

City of Antioch

Survey Time: 1335-1415

Street Width: 36 Ft

DATE: 11/14/2014

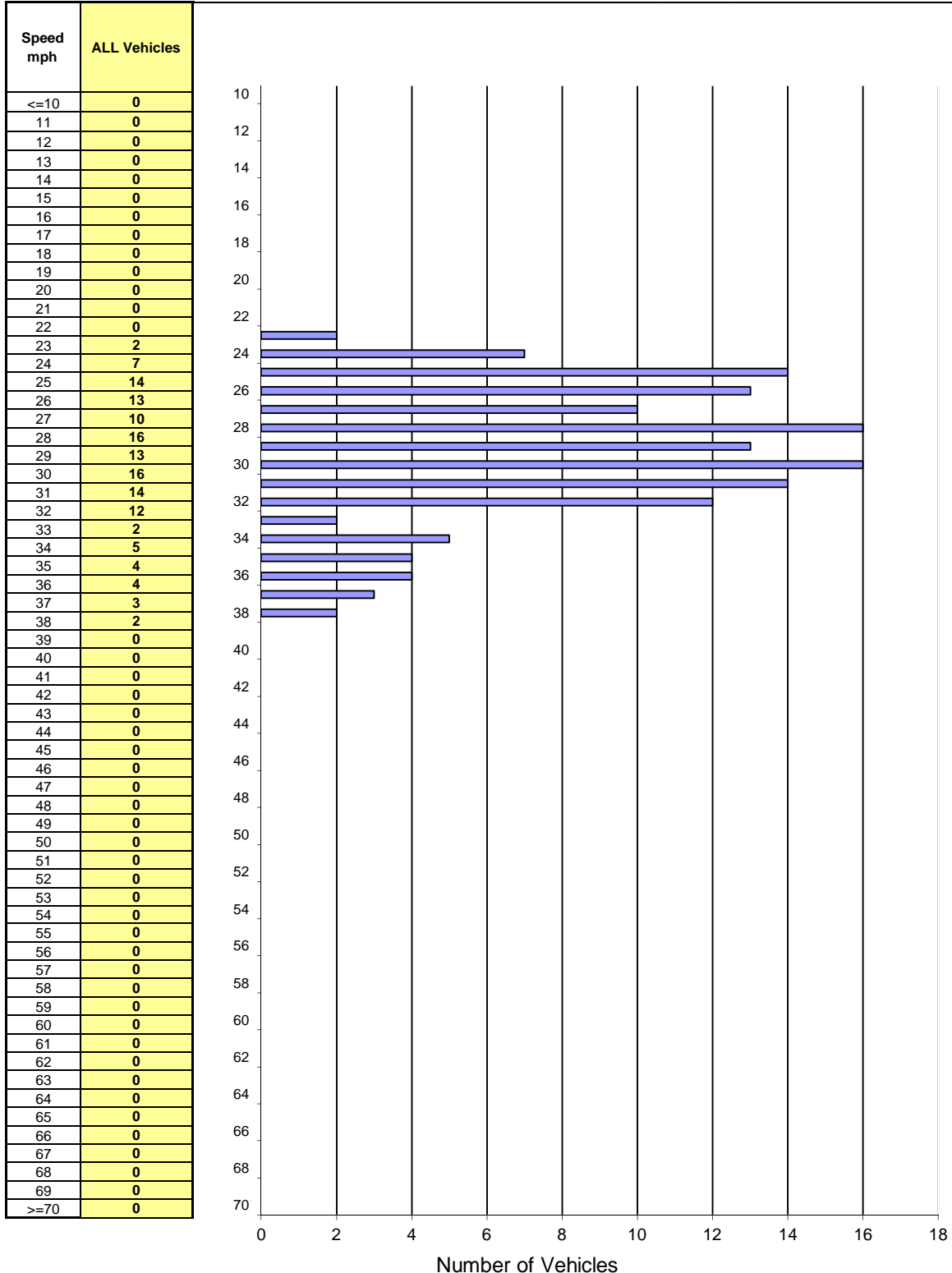
Location: 3240 G Street

DAY: Friday

Posted Speed: 25 MPH

Project #: 14-7726-030

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	137	23-38	29 mph	32 mph	23 - 32	117	85%	0% / 0	15% / 20

# Spot Speed Study

Segment #31: Garrow Dr.  
between E. Tregallas Rd. and Davison Dr.

City of Antioch

Survey Time: 0930-1130

Street Width: 31 Ft

DATE: 11/13/2014

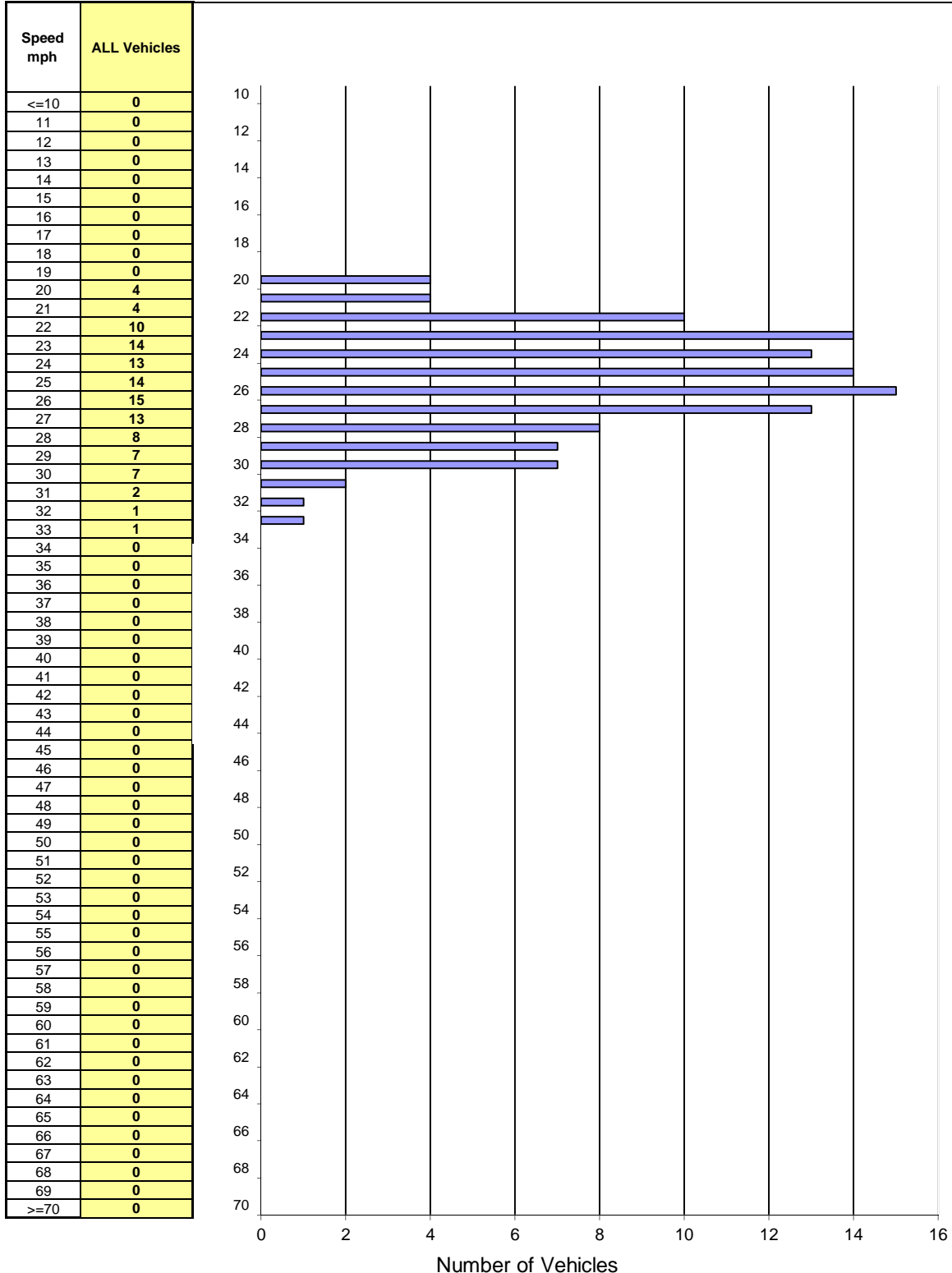
Location: 3316 Garrow Drive

DAY: Thursday

Posted Speed: 25 MPH

Project #: 14-7726-031

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	113	20-33	25 mph	29 mph	21 - 30	105	93%	3% / 4	4% / 4

# Spot Speed Study

Segment #32: Gentrytown Dr.  
between Buchanan Rd. and Putnam St.

City of Antioch

Survey Time: 1155-1245

Street Width: 36 Ft

DATE: 11/21/2014

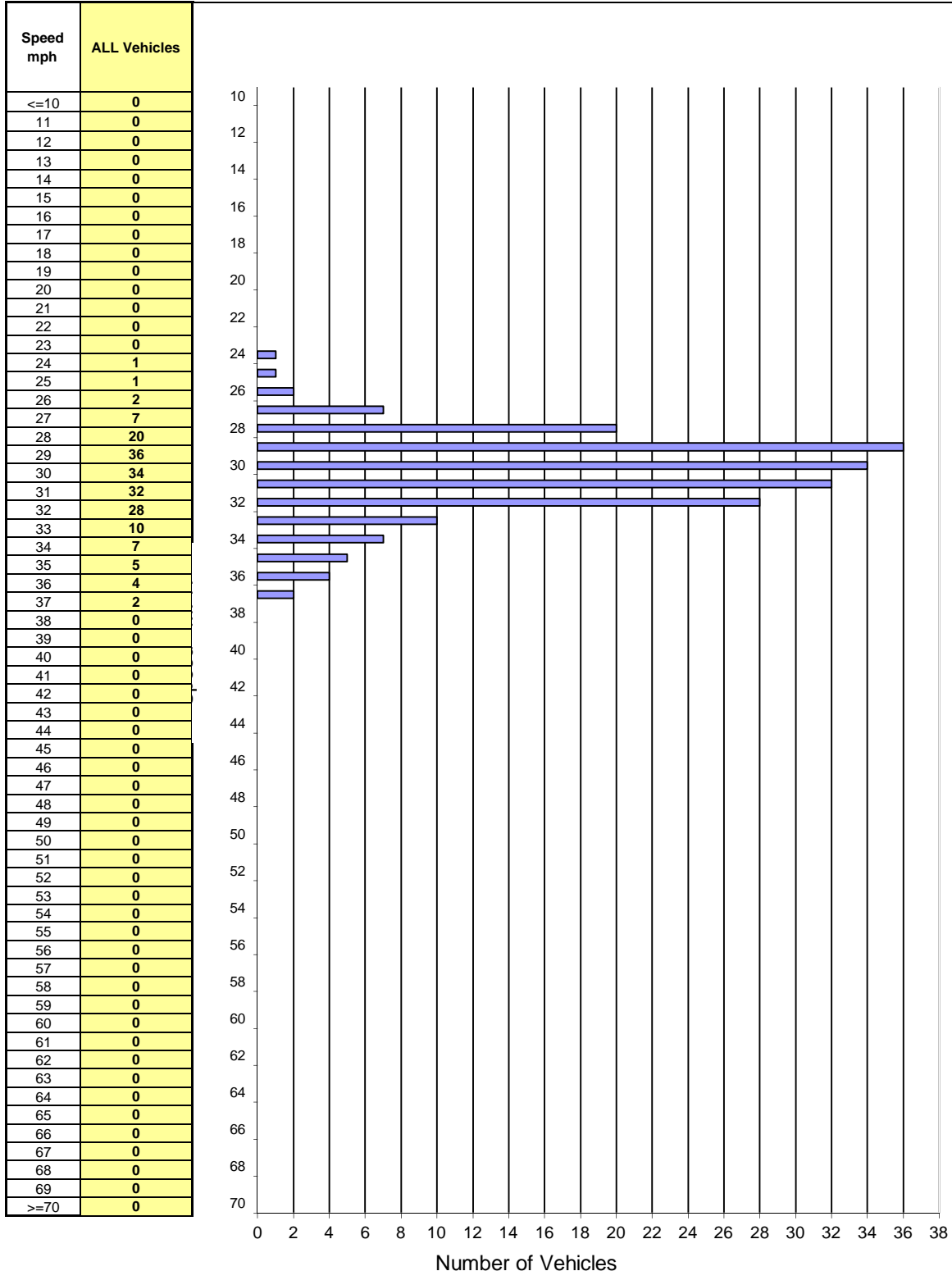
Location: 2823 Gentrytown Drive

DAY: Friday

Posted Speed: 25 MPH

Project #: 14-7726-032

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	189	24-44	30 mph	32 mph	27 - 36	183	97%	2% / 4	2% / 2

# Spot Speed Study

Segment #33: Gentrytown Dr.  
between Putnam St. and James Donlon Blvd.

City of Antioch

Survey Time: 1045-1145

Street Width: 36 Ft

DATE: 11/12/2014

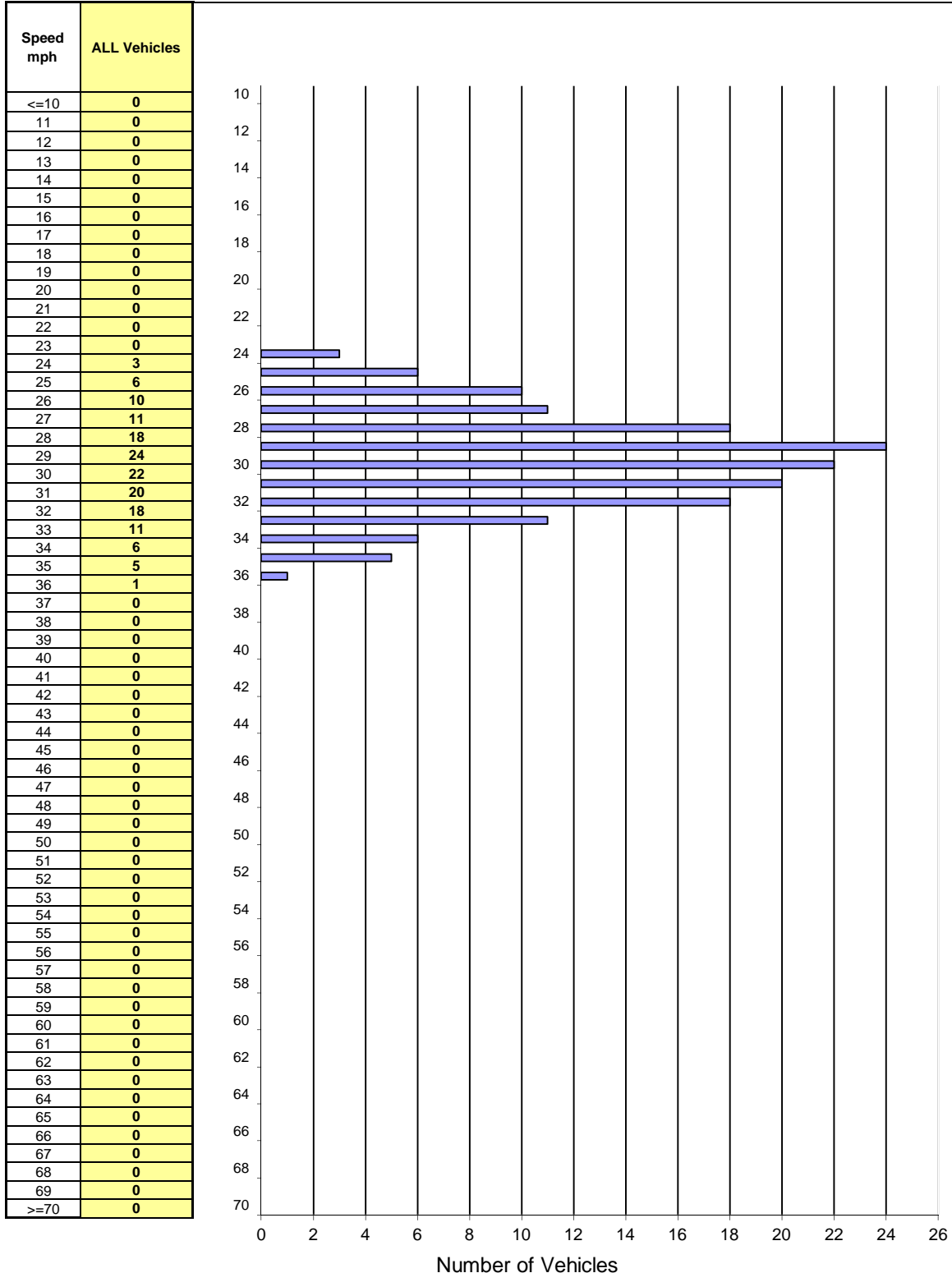
Location: 3315 Gentrytown Drive

DAY: Wednesday

Posted Speed: 25 MPH

Project #: 14-7726-033

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	155	24-40	30 mph	32 mph	25 - 34	146	94%	1% / 3	4% / 6

# Spot Speed Study

Segment #34: Hillcrest Ave.  
between 18th St. and Sunset Dr.

City of Antioch

Survey Time: 1215-1250

Street Width: 72 Ft

DATE: 11/10/2014

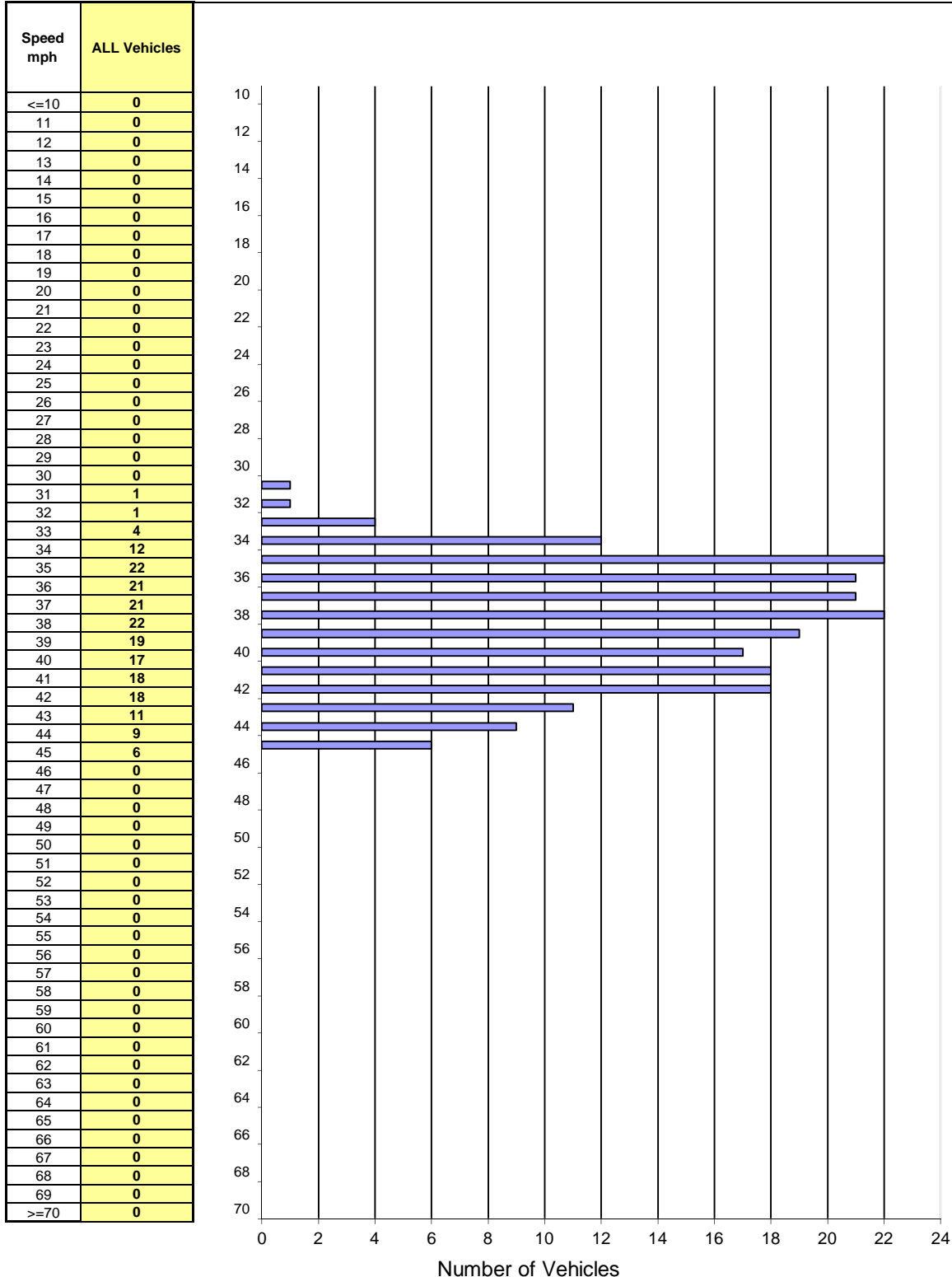
Location: 2024 Hillcrest Avenue

DAY: Monday

Posted Speed: 35 MPH

Project #: 14-7726-034

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	202	31-51	38 mph	42 mph	34 - 43	181	90%	2% / 6	8% / 15

# Spot Speed Study

Segment #35: Hillcrest Ave.  
between Sunset Dr. and Davison Dr.

City of Antioch

Survey Time: 1415-1515

Street Width: 82 Ft

DATE: 11/19/2014

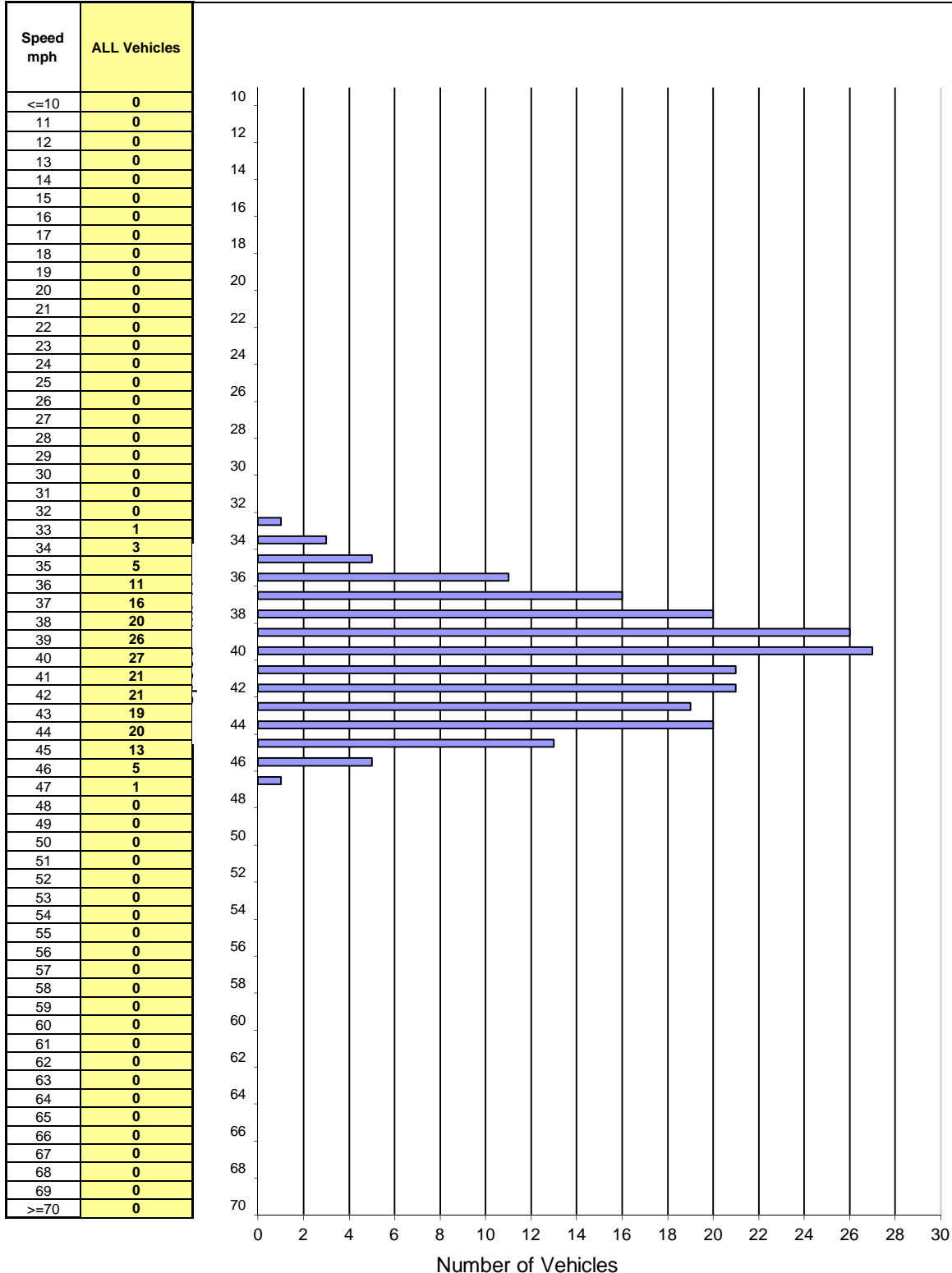
Location: 2751 Hillcrest Avenue

DAY: Wednesday

Posted Speed: 45 MPH

Project #: 14-7726-035

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	209	33-47	40 mph	44 mph	36 - 45	194	93%	4% / 9	3% / 6

# Spot Speed Study

Segment #36: Hillcrest Ave.  
between Davison Dr. and Lone Tree Wy.

City of Antioch

Survey Time: 0900-0940

Street Width: 62 Ft

DATE: 11/12/2014

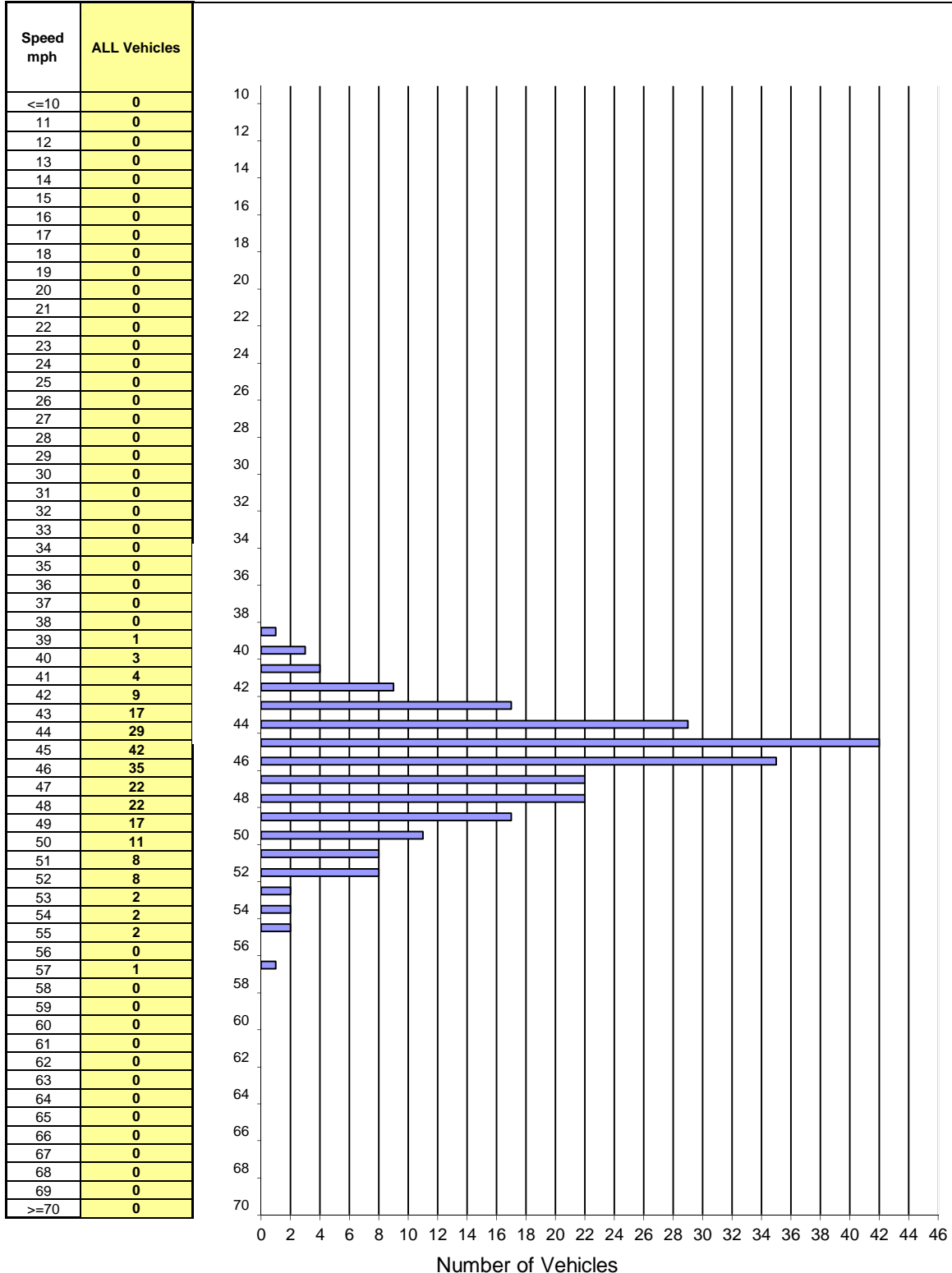
Location: 3527 Hillcrest Avenue

DAY: Wednesday

Posted Speed: 45 MPH

Project #: 14-7726-036

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	235	39-57	46 mph	49 mph	42 - 51	212	90%	3% / 8	7% / 15



# Spot Speed Study

Segment #37: James Donlon Blvd.  
between Somersville Rd. and Contra Loma Blvd.

City of Antioch

Survey Time: 1210-1240

Street Width: 71 Ft

DATE: 11/12/2014

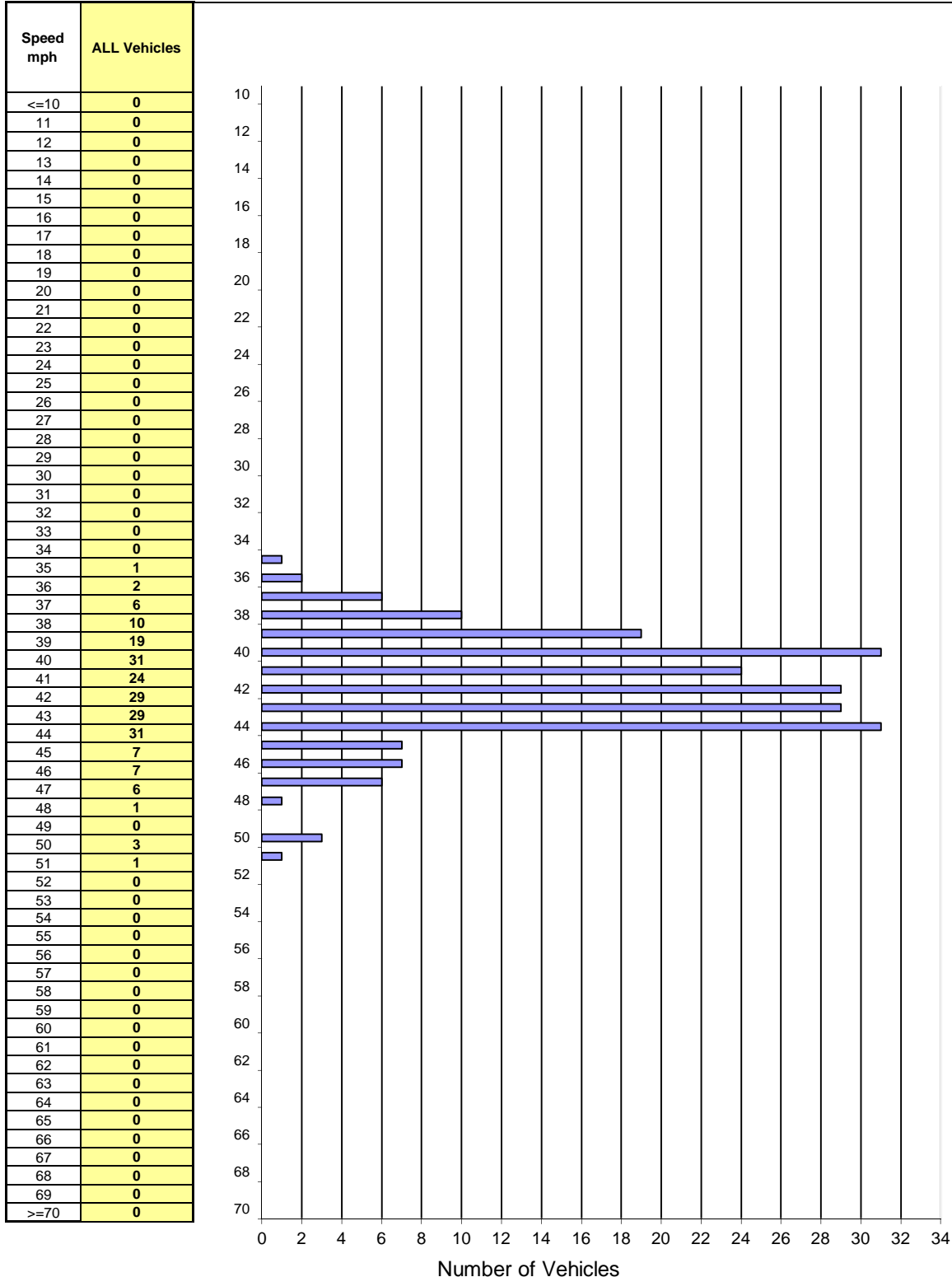
Location: James Donlon Boulevard mid block between Silverado Drive and Gentrytown Drive

DAY: Wednesday

Posted Speed: 40 MPH

Project #: 14-7726-037

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	207	35-51	42 mph	44 mph	37 - 46	193	93%	1% / 3	6% / 11

# Spot Speed Study

Segment #38: James Donlon Blvd.  
between Contra Loma Blvd. and Lone Tree Wy.

City of Antioch

Survey Time: 1000-1030

Street Width: 71 Ft

DATE: 11/12/2014

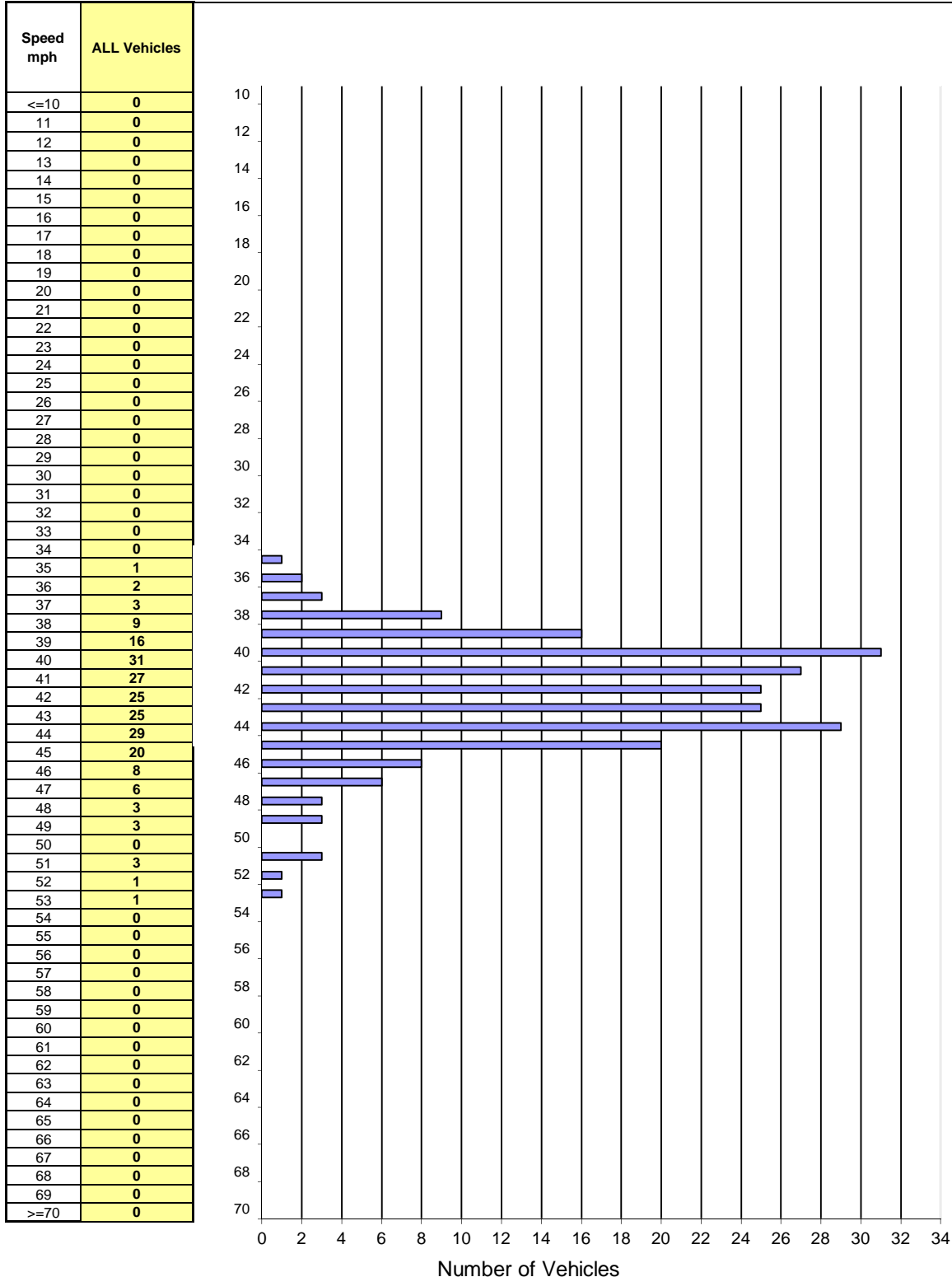
Location: James Donlon Boulevard mid block between G Street and S. Royal Links Circle

DAY: Wednesday

Posted Speed: 40 MPH

Project #: 14-7726-038

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	213	35-53	42 mph	45 mph	38 - 47	196	92%	2% / 6	6% / 11

# Spot Speed Study

Segment #39: L St.  
between 2nd St. and 10th St.

City of Antioch

Survey Time: 0900-1015

Street Width: 62 Ft

DATE: 11/6/2014

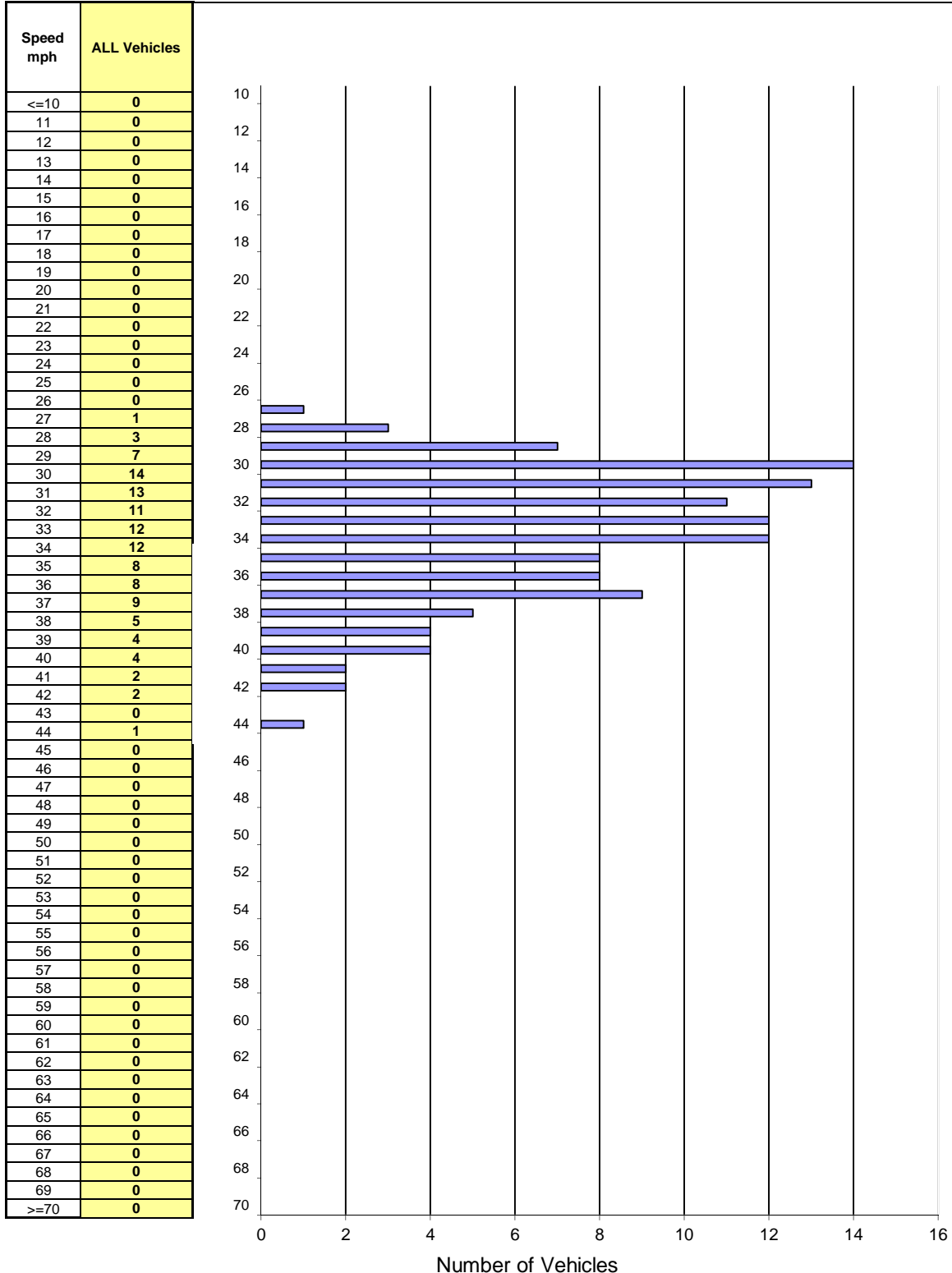
Location: 755 L Street

DAY: Thursday

Posted Speed: 25 MPH

Project #: 14-7726-039

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	116	27-44	33 mph	38 mph	29 - 38	99	85%	3% / 4	12% / 13

# Spot Speed Study

Segment #40: L St.  
between 10th St. and 18th St.

City of Antioch

Survey Time: 0950-1030

Street Width: 39 Ft

DATE: 11/7/2014

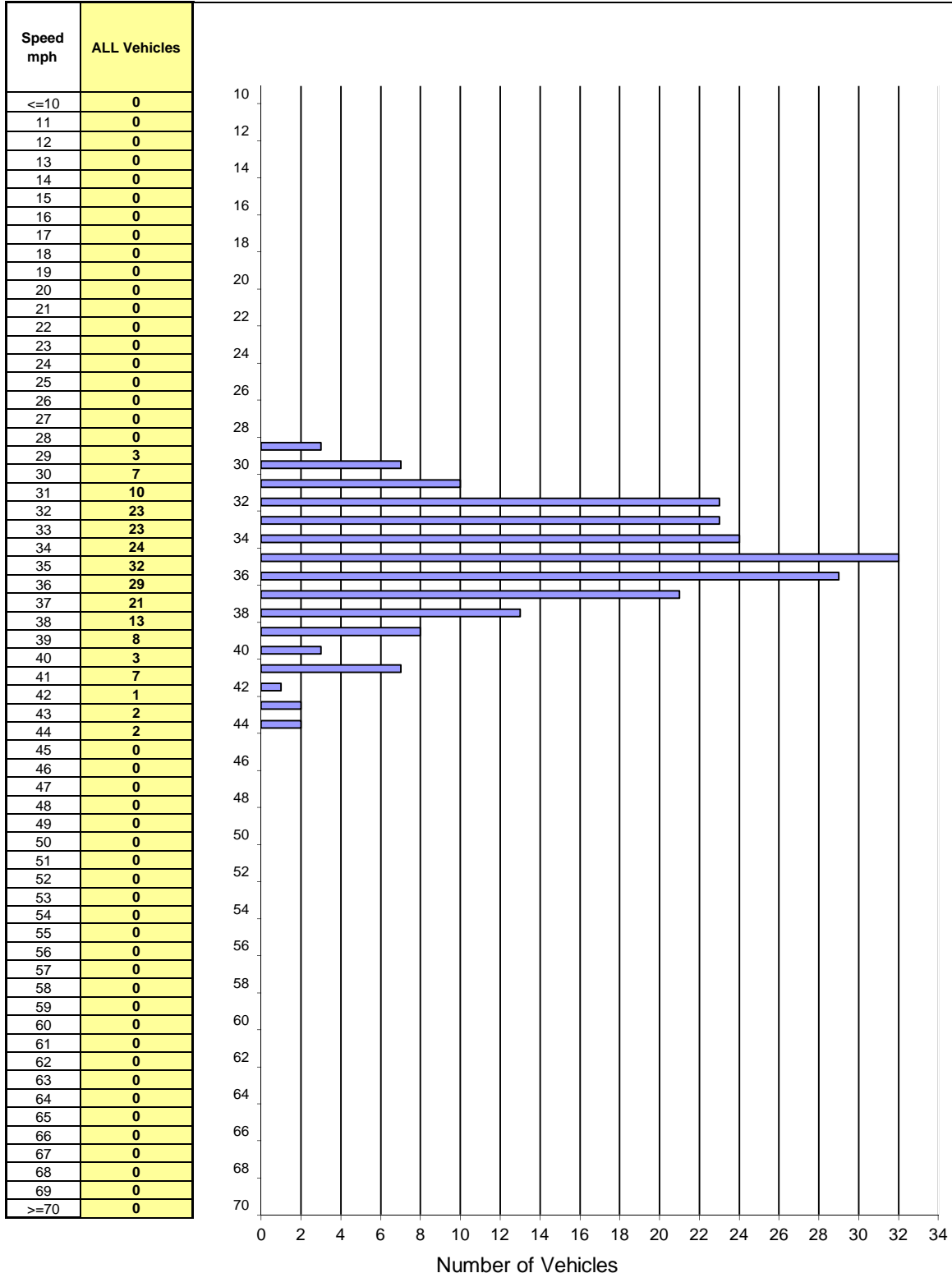
Location: 1121 L Street

DAY: Friday

Posted Speed: 35 MPH

Project #: 14-7726-040

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	208	29-44	35 mph	38 mph	30 - 39	190	91%	1% / 3	8% / 15

# Spot Speed Study

Segment #41: L St.  
between 18th St. and SR-4

City of Antioch

Survey Time: 1030-1120

Street Width: 54 Ft

DATE: 11/20/2014

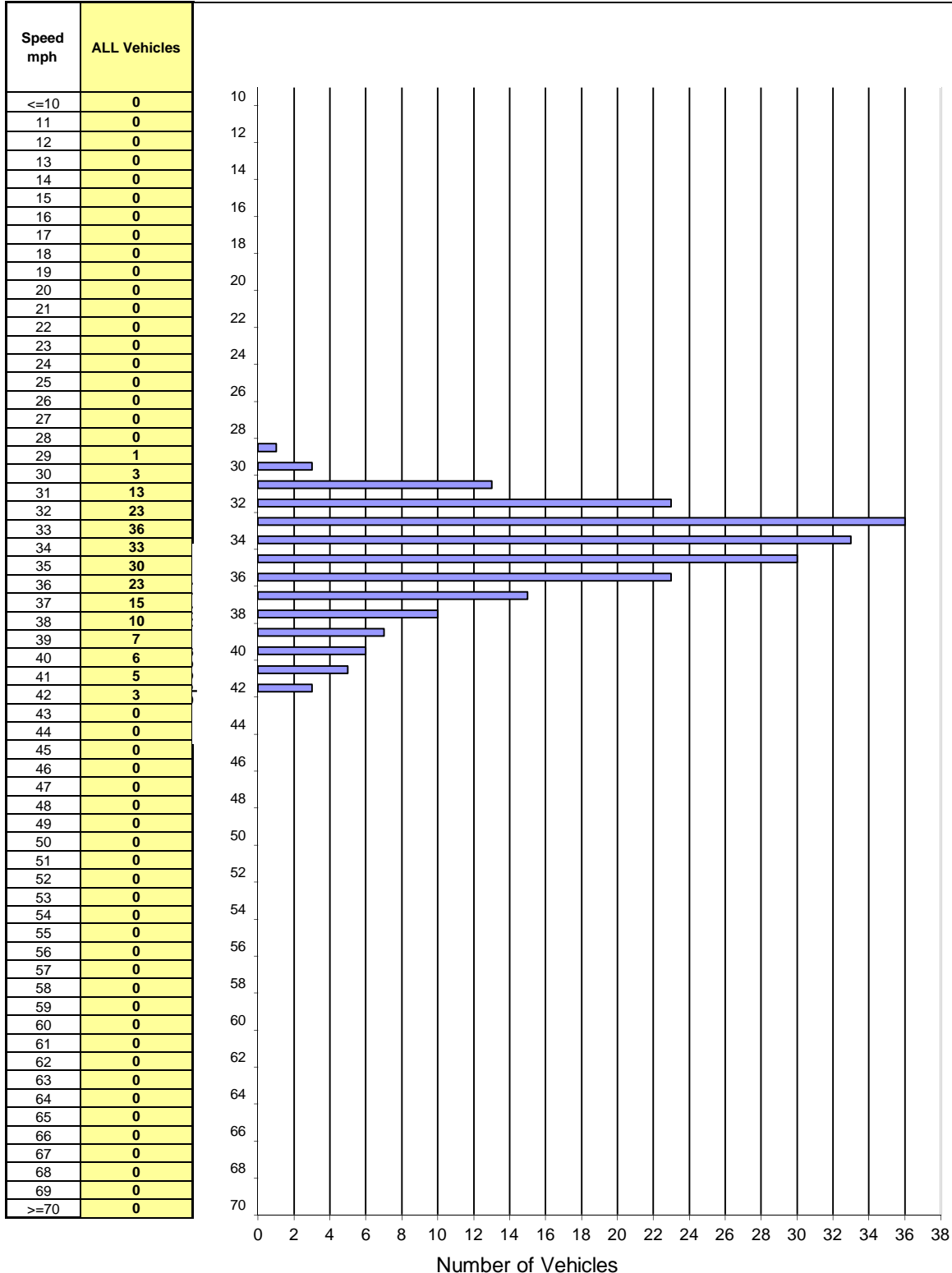
Location: 2212 L Street

DAY: Thursday

Posted Speed: 35 MPH

Project #: 14-7726-041

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	208	29-42	34 mph	37 mph	31 - 40	196	94%	1% / 4	4% / 8

# Spot Speed Study

Segment #42: Laurel Rd.  
between Hillcrest Ave. and End

City of Antioch

Survey Time: 1150-1235

Street Width: 66 Ft

DATE: 11/20/2014

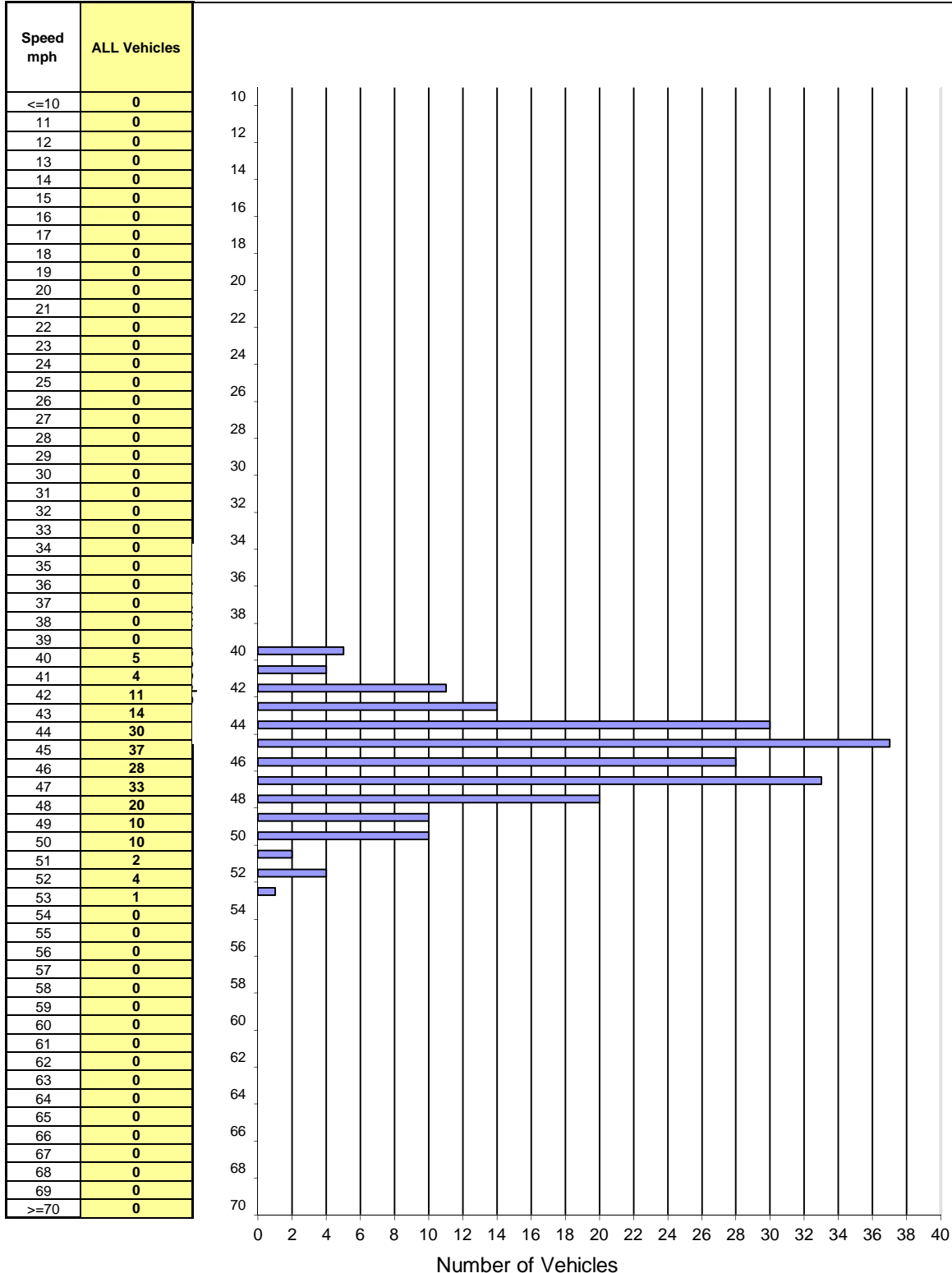
Location: Laurel Road 500 feet south of Kushner Way

DAY: Thursday

Posted Speed: 45 MPH

Project #: 14-7726-042

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	209	40-53	46 mph	48 mph	41 - 50	197	94%	2% / 5	4% / 7

# Spot Speed Study

Segment #43: Laurel Rd.  
between SR-4 and City Limits

City of Antioch

Survey Time: 1300-1330

Street Width: 65 Ft

DATE: 11/20/2014

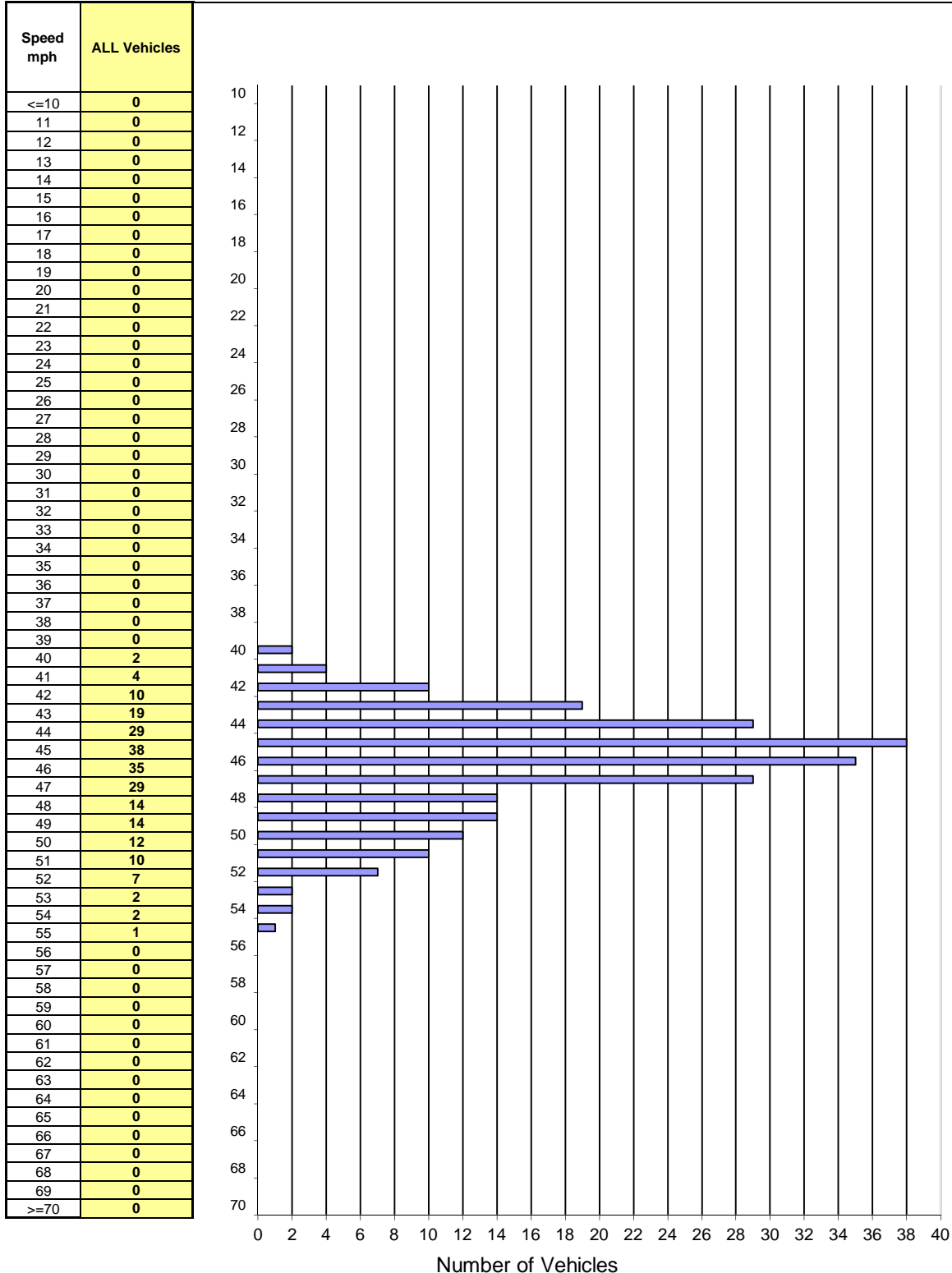
Location: Laurel Road 600 feet west of Oak Avenue

DAY: Thursday

Posted Speed: 45 MPH

Project #: 14-7726-043

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	228	40-55	46 mph	49 mph	42 - 51	210	92%	2% / 6	6% / 12

# Spot Speed Study

Segment #44: Lone Tree Wy.  
between SR-4 and Putnam St.

City of Antioch

Survey Time: 1145-1210

Street Width: 62 Ft

DATE: 11/13/2014

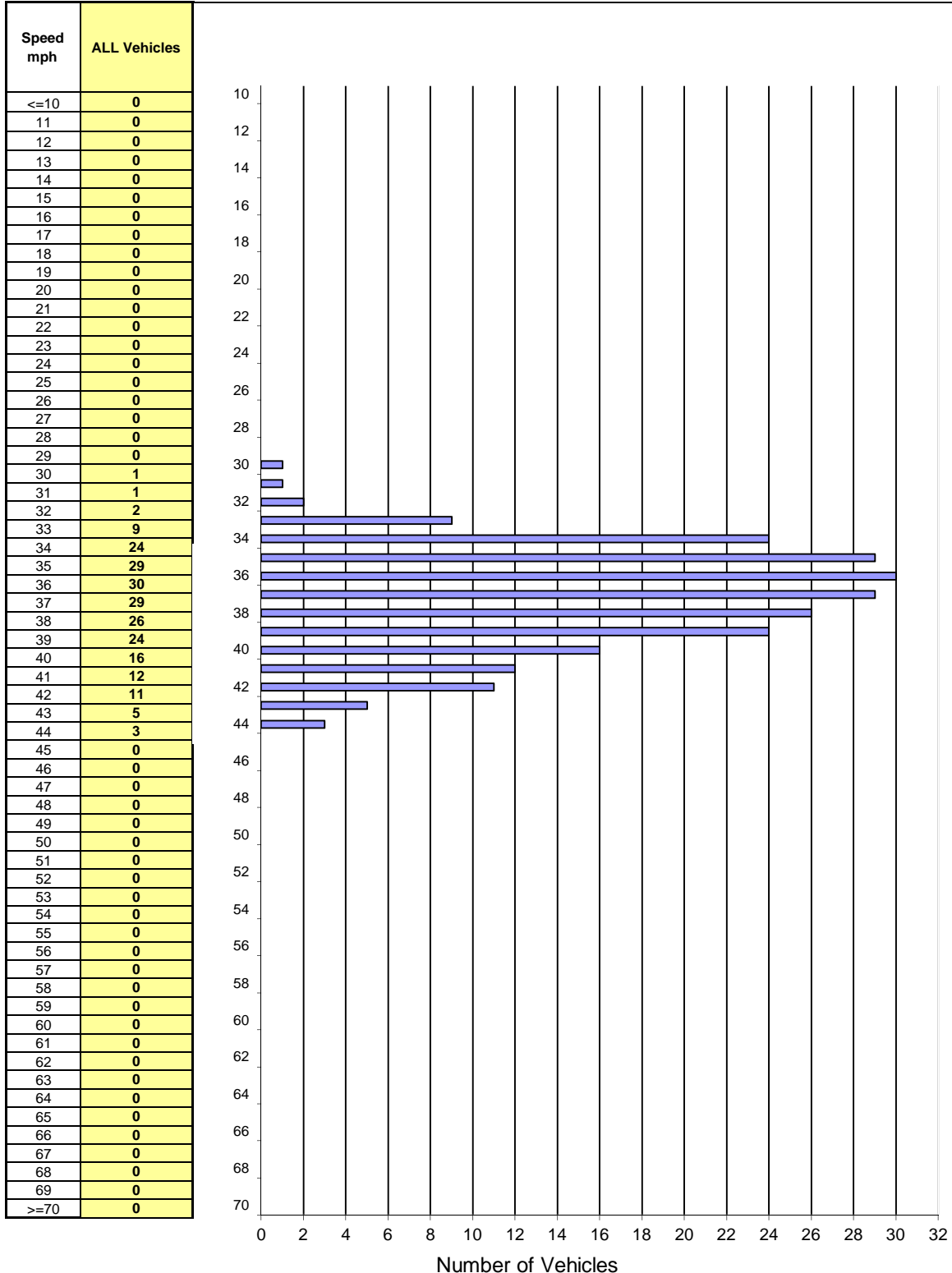
Location: 2866 Lone Tree Way

DAY: Thursday

Posted Speed: 30 MPH

Project #: 14-7726-044

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	222	30-44	37 mph	40 mph	33 - 42	210	95%	1% / 4	4% / 8



# Spot Speed Study

Segment #45: Lone Tree Wy.  
between Putnam St. and James Donlon Blvd.

City of Antioch

Survey Time: 1220-1245

Street Width: 72 Ft

DATE: 11/13/2014

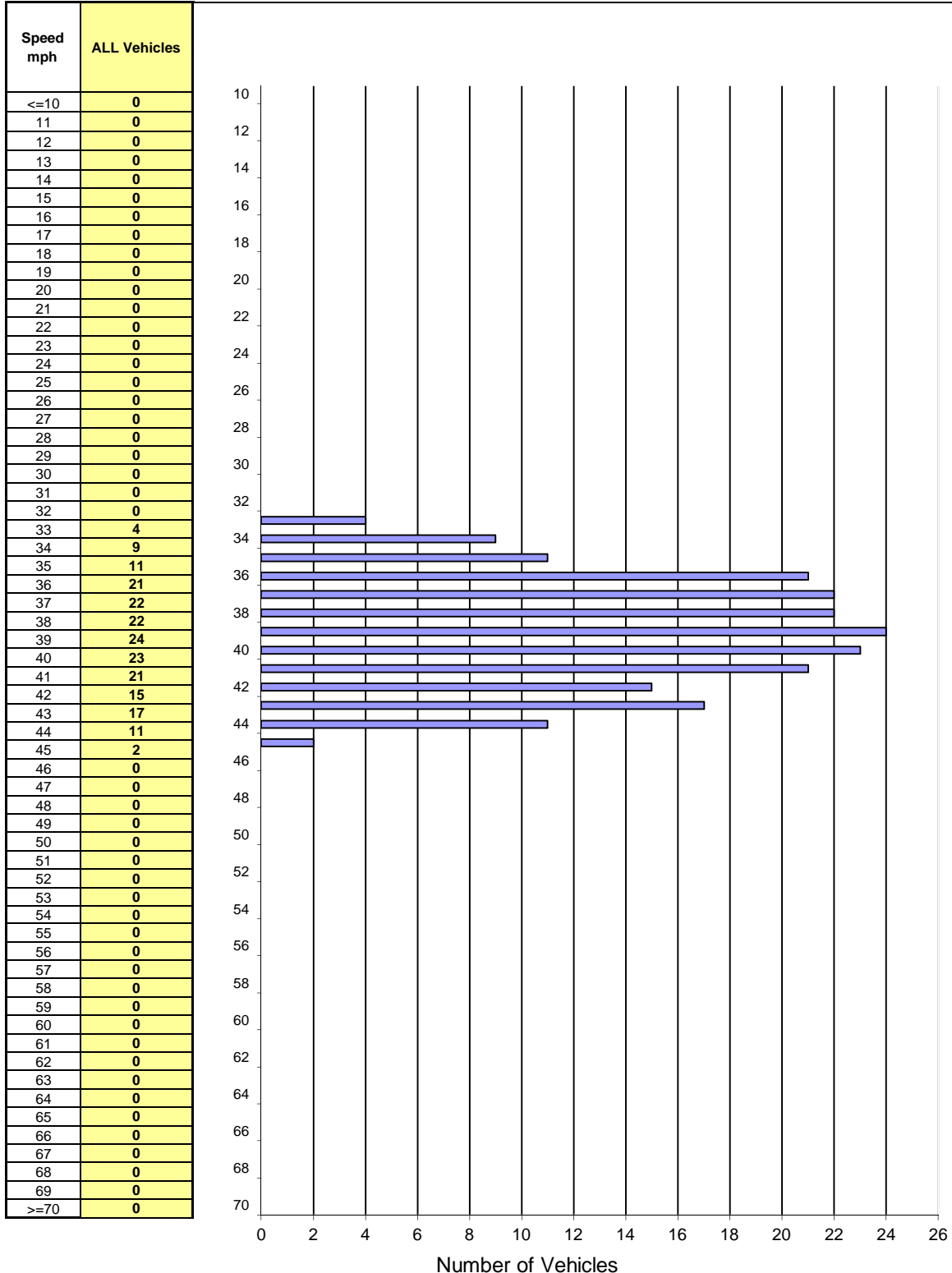
Location: 3120 Lone Tree Way

DAY: Thursday

Posted Speed: 35 MPH

Project #: 14-7726-045

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	202	33-51	39 mph	42 mph	35 - 44	187	93%	6% / 13	1% / 2

# Spot Speed Study

Segment #46: Lone Tree Wy.  
between James Donlon Blvd. and Deer Valley Rd.

City of Antioch

Survey Time: 1310-1340

Street Width: 71 Ft

DATE: 11/13/2014

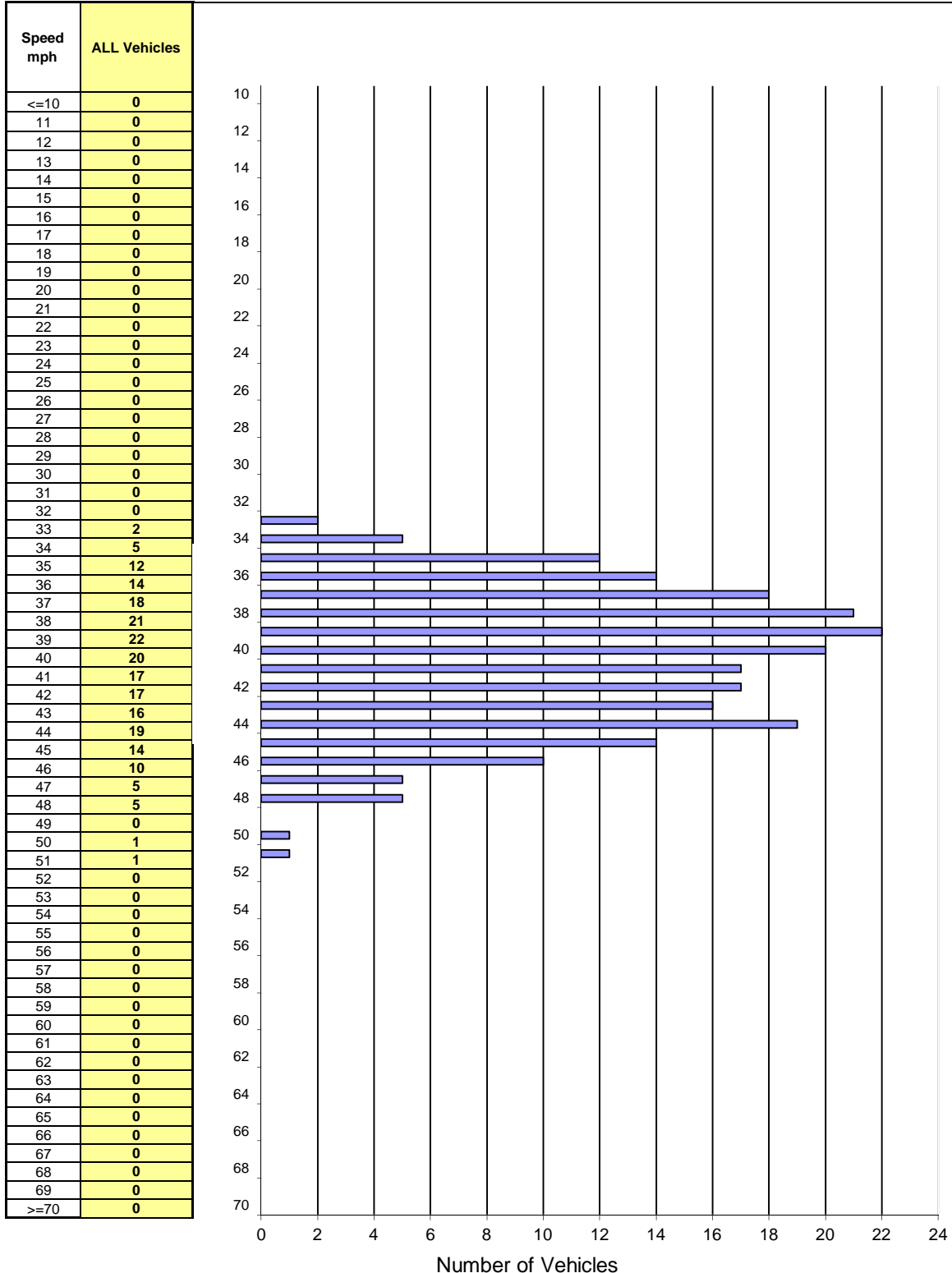
Location: 4055 Lone Tree Way

DAY: Thursday

Posted Speed: 45 MPH

Project #: 14-7726-046

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	219	33-51	40 mph	45 mph	36 - 45	178	81%	8% / 19	11% / 22

# Spot Speed Study

Segment #47: Lone Tree Wy.  
between Deer Valley Rd. and City Limits

City of Antioch

Survey Time: 1140-1220

Street Width: 70 Ft

DATE: 11/25/2014

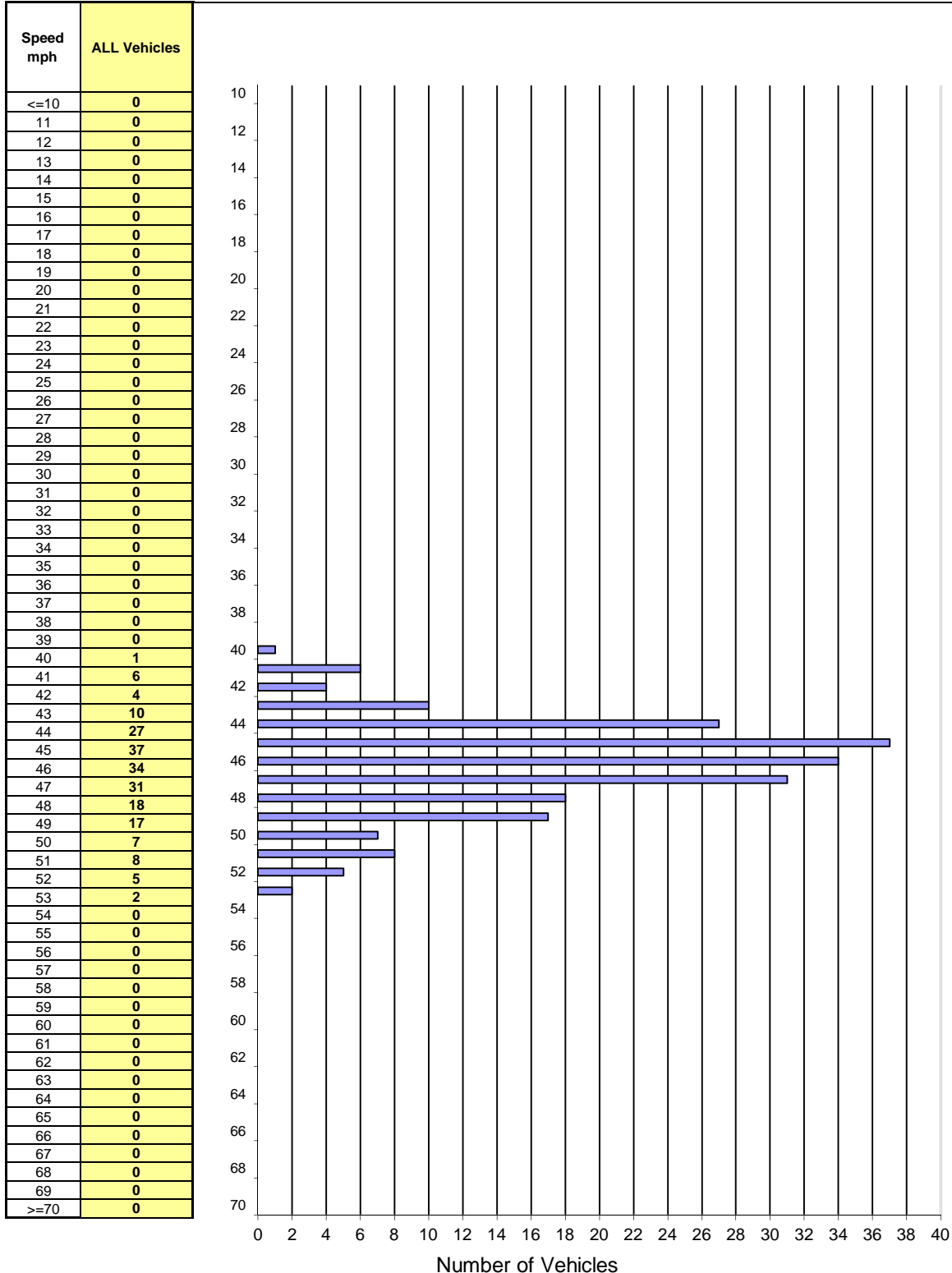
Location: 4672 Lone Tree Way

DAY: Tuesday

Posted Speed: 45 MPH

Project #: 14-7726-047

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	207	40-53	46 mph	49 mph	43 - 52	194	94%	5% / 11	1% / 2

# Spot Speed Study

Segment #48: Minaker/13th/Hillcrest  
between Wilbur Ave. and 18th St.

City of Antioch

Survey Time: 1255-1355

Street Width: 60 Ft

DATE: 11/4/2014

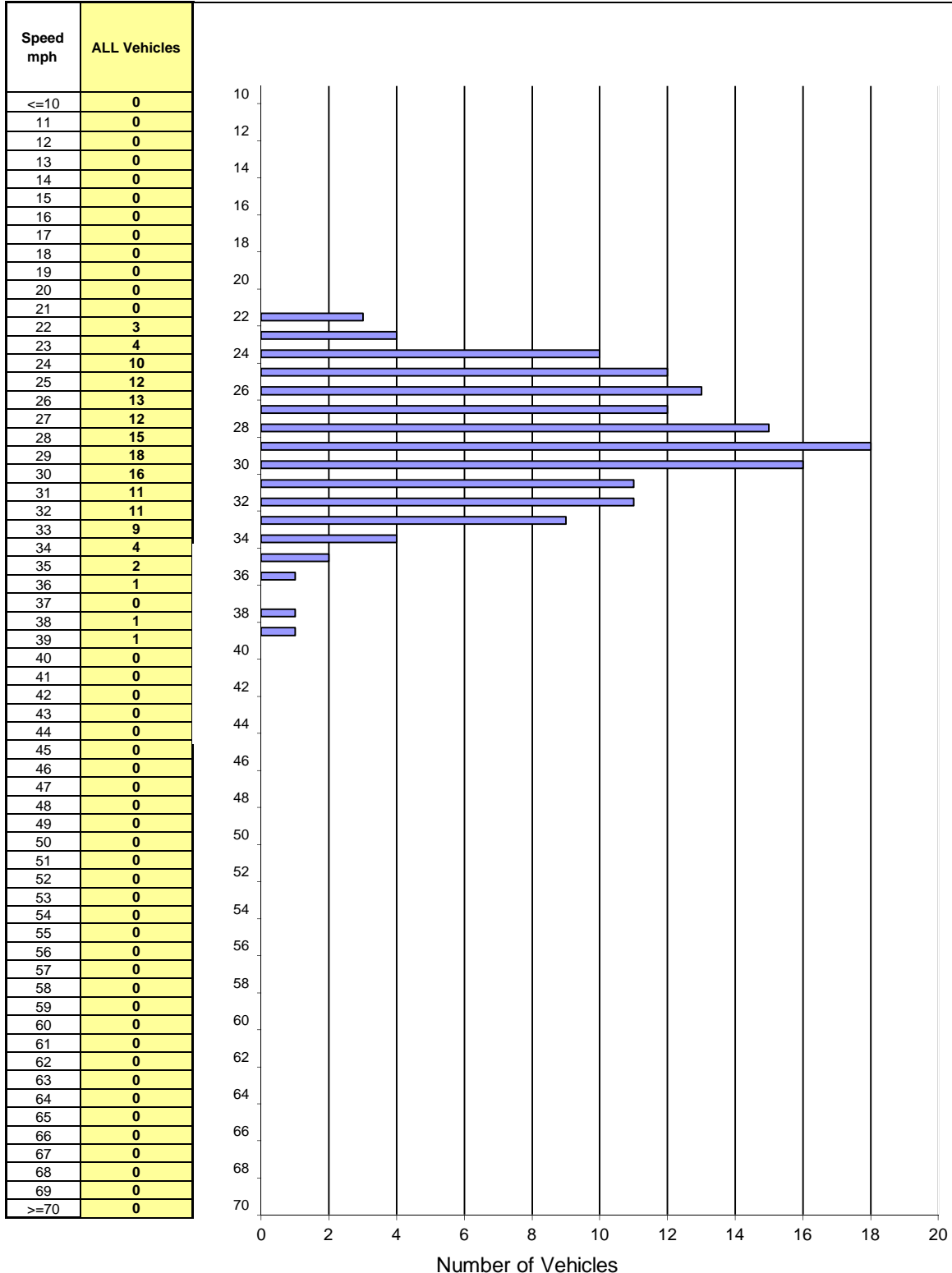
Location: 1017 Minaker Drive

DAY: Tuesday

Posted Speed: 25 MPH

Project #: 14-7726-048

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	143	22-39	29 mph	32 mph	24 - 33	127	89%	4% / 7	7% / 9

# Spot Speed Study

Segment #49: W 9th St.  
between O St. and G St.

City of Antioch

Survey Time: 1330-1445

Street Width: 35 Ft

DATE: 11/6/2014

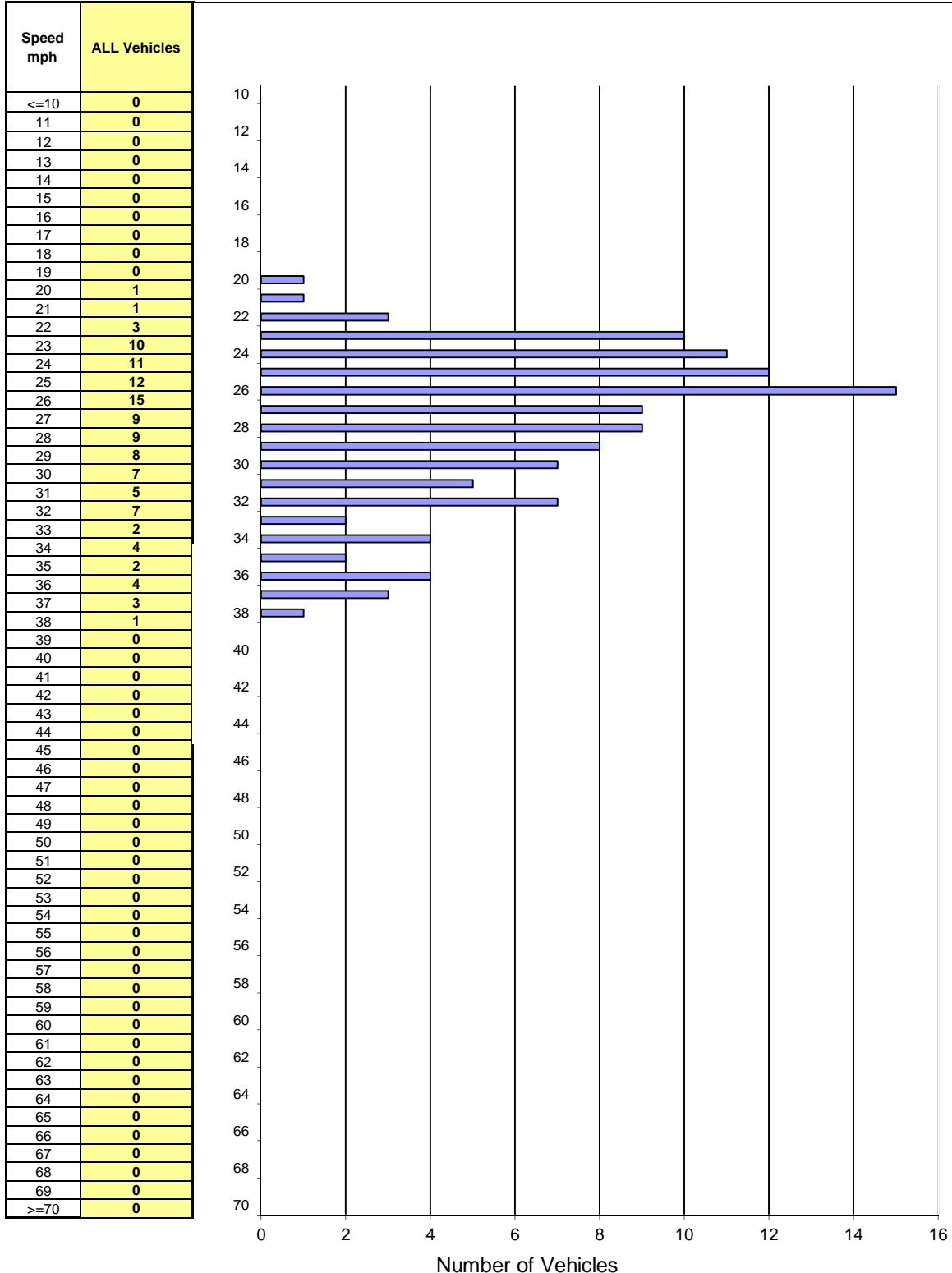
Location: 912 West 9th Street

DAY: Thursday

Posted Speed: 25 MPH

Project #: 14-7726-049

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	114	20-38	27 mph	32 mph	23 - 32	93	82%	4% / 5	15% / 16

# Spot Speed Study

Segment #50: W 9th St.  
between G St. and A St.

City of Antioch

Survey Time: 1030-1200

Street Width: 35 Ft

DATE: 11/6/2014

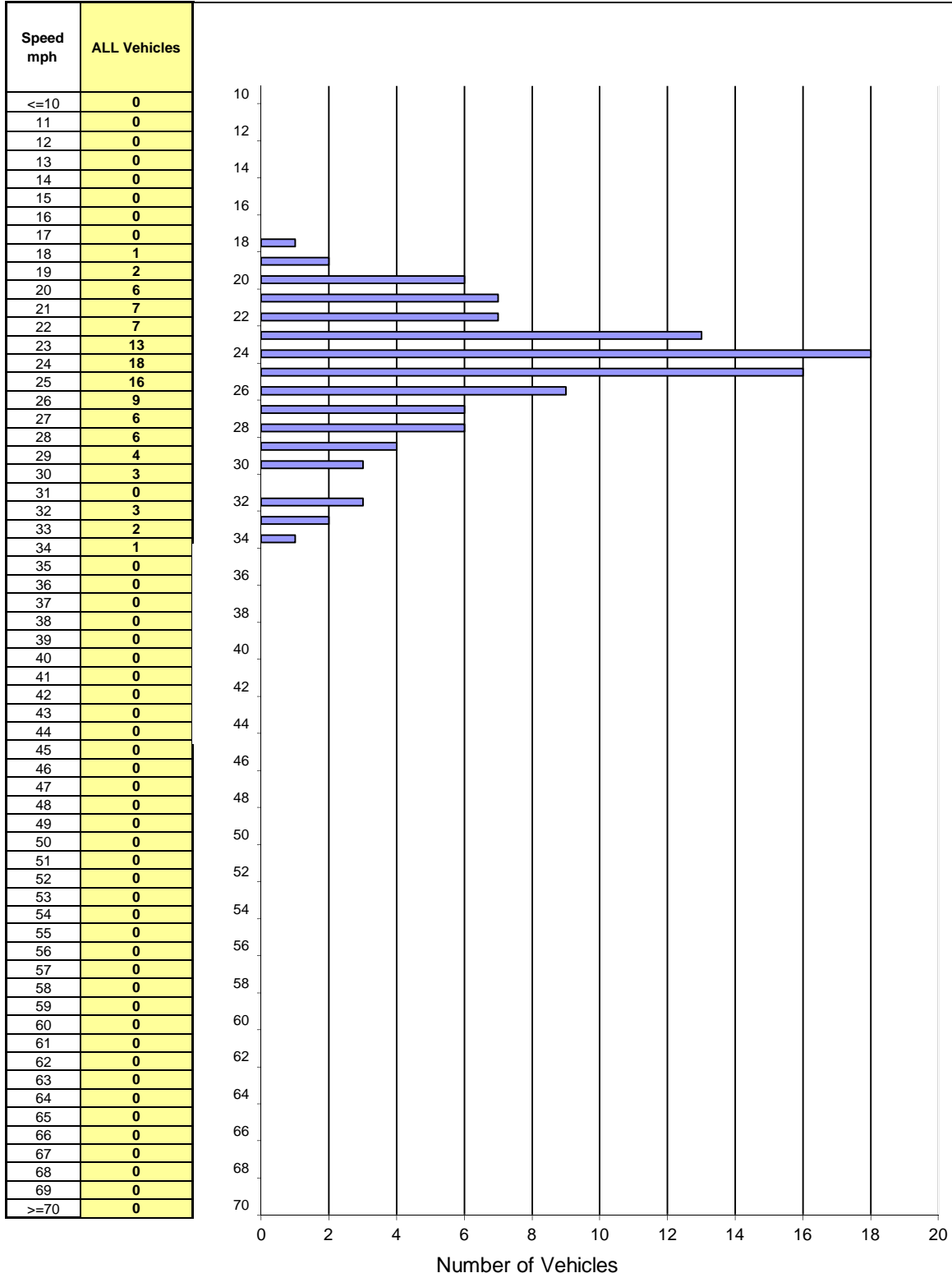
Location: 312 West 9th Street

DAY: Thursday

Posted Speed: 25 MPH

Project #: 14-7726-050

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	104	18-34	24 mph	28 mph	20 - 29	92	88%	2% / 3	9% / 9

# Spot Speed Study

Segment #51: Pittsburg-Antioch (W 10th St.)  
between City Limits and Auto Center Dr.

City of Antioch

Survey Time: 1055-1130

Street Width: 42 Ft

DATE: 11/7/2014

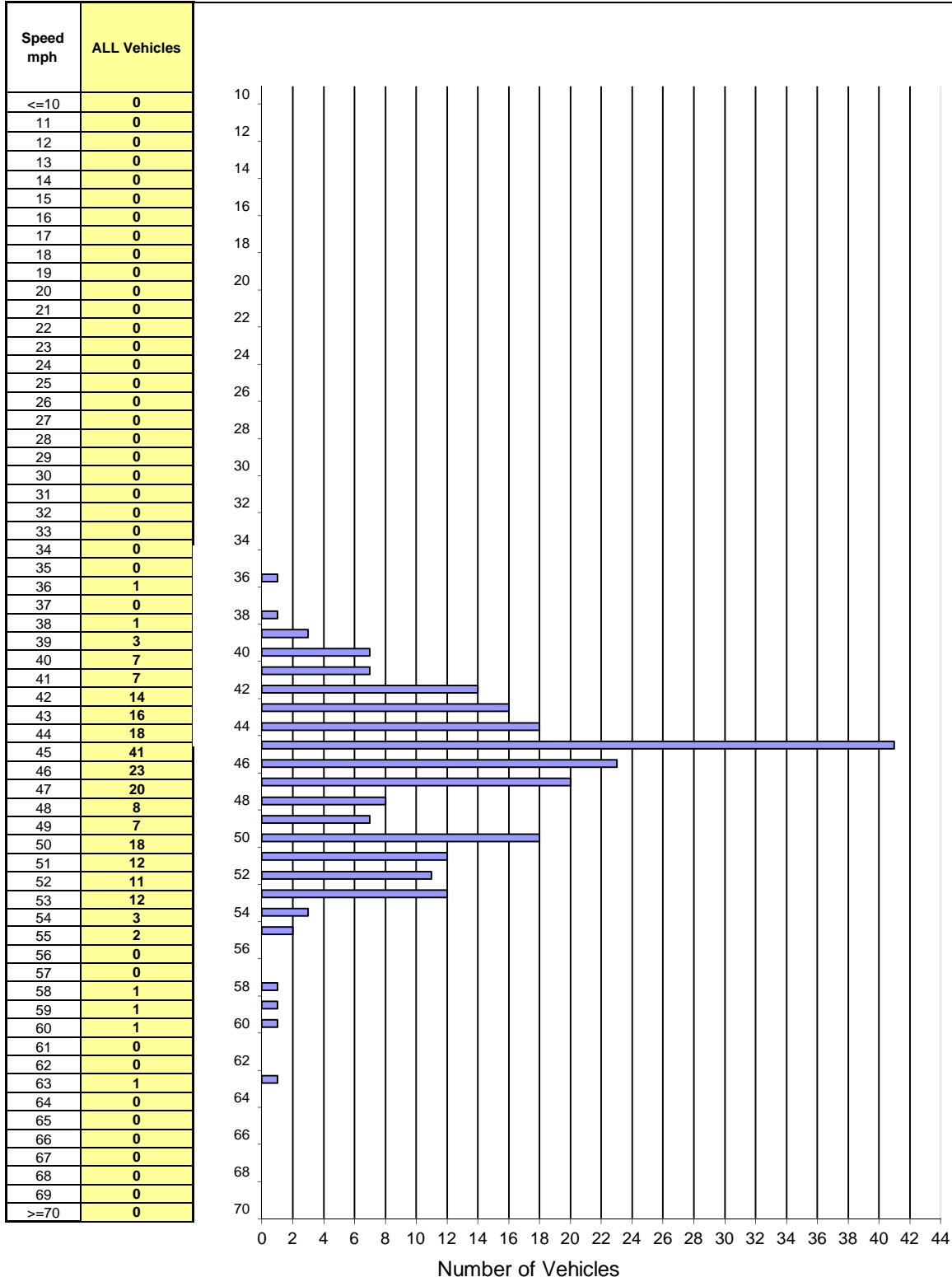
Location: 2484 West 10th Street

DAY: Friday

Posted Speed: 50 MPH

Project #: 14-7726-051

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	228	35-63	46 mph	51 mph	42 - 51	177	78%	8% / 19	15% / 32

# Spot Speed Study

Segment #52: Putnam St.  
between Gentrytown Dr. and Contra Loma Blvd.

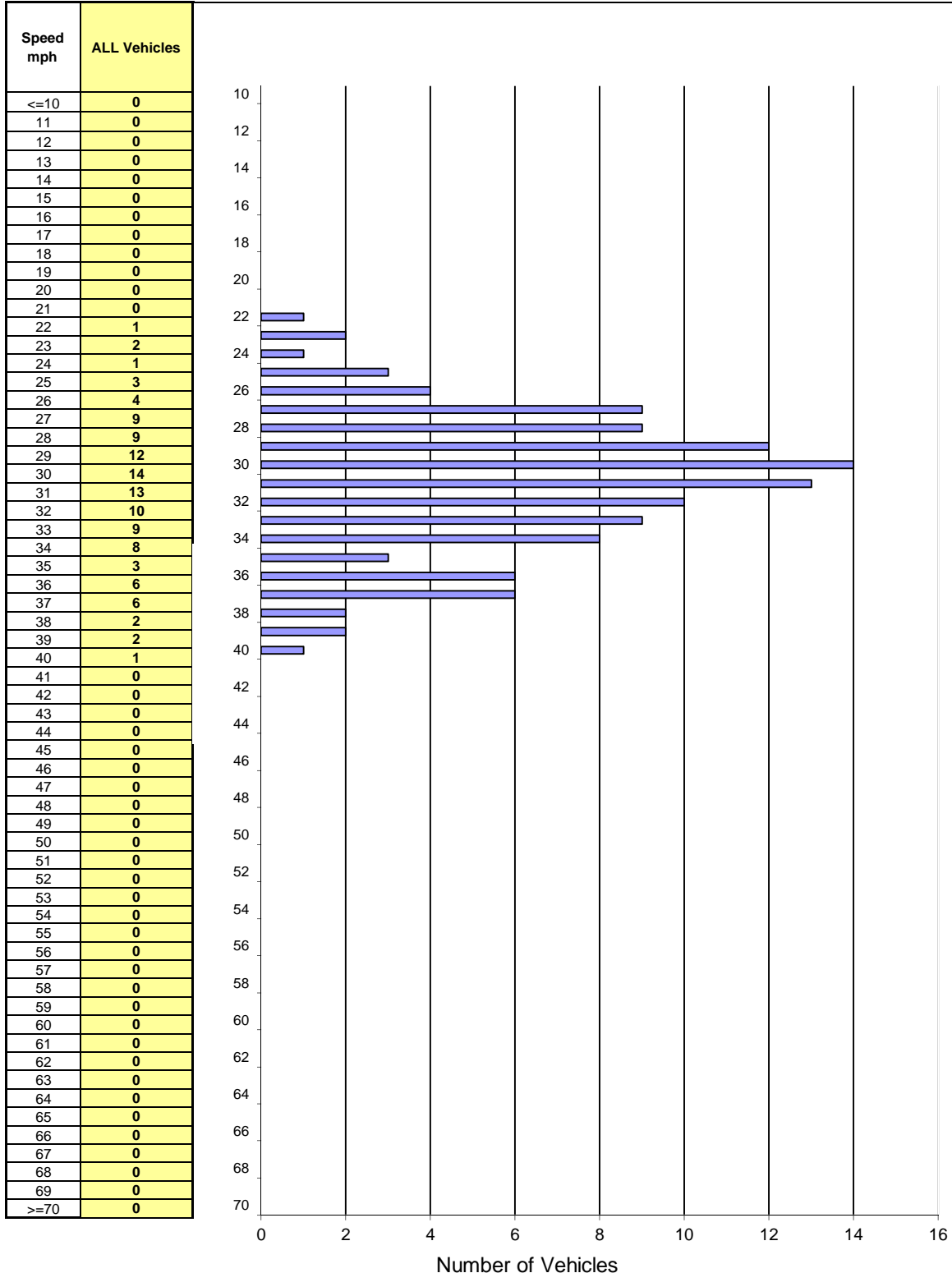
City of Antioch

Survey Time: 1100-1200  
DATE: 11/14/2014  
DAY: Friday

Street Width: 36 Ft  
Location: 1219 Putnam Street  
Posted Speed: 25 MPH

Project #: 14-7726-052

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	115	22-40	31 mph	35 mph	27 - 36	93	81%	9% / 11	10% / 11



# Spot Speed Study

Segment #53: Putnam St.  
between Contra Loma Blvd. and Lone Tree Wy.

City of Antioch

Survey Time: 1220-1320

Street Width: 38 Ft

DATE: 11/14/2014

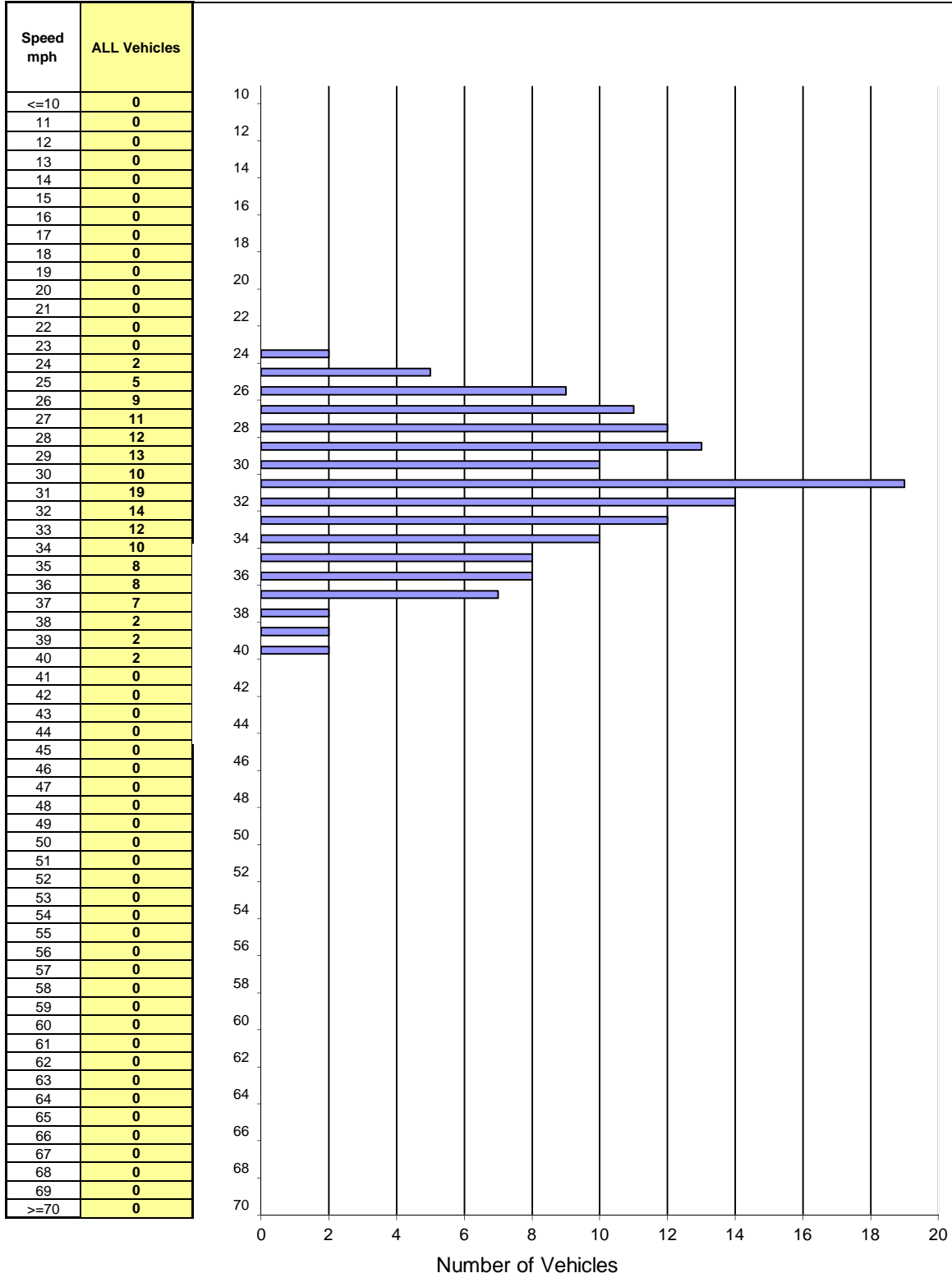
Location: 609 Putnam Street

DAY: Friday

Posted Speed: 25 MPH

Project #: 14-7726-053

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	146	24-40	31 mph	35 mph	26 - 35	118	81%	4% / 7	15% / 21

# Spot Speed Study

Segment #54: W. 2nd St.  
between L St. and G St.

City of Antioch

Survey Time: 1000-1100

Street Width: 34 Ft

DATE: 11/5/2014

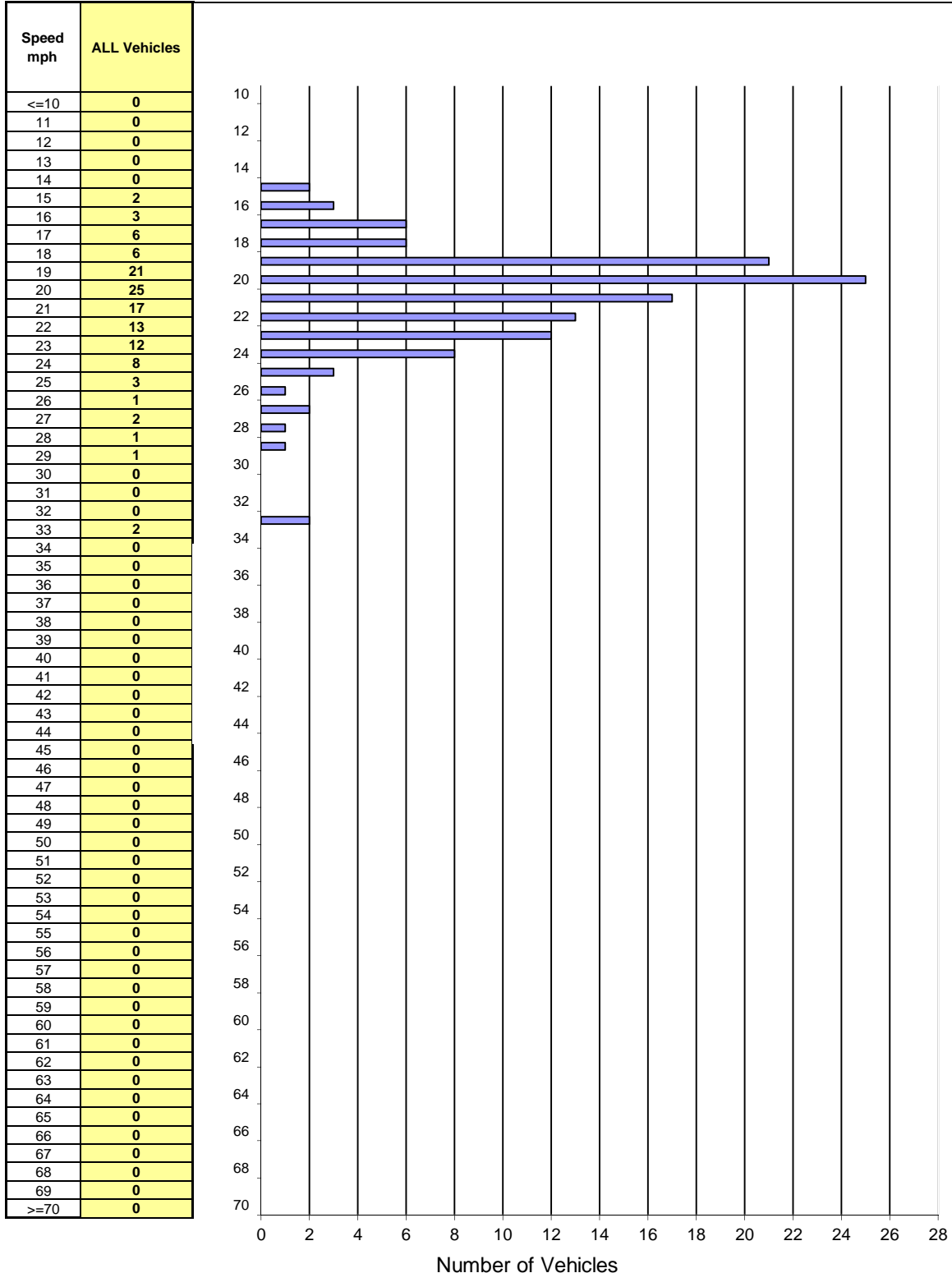
Location: 682 W. 2nd Street

DAY: Wednesday

Posted Speed: 25 MPH

Project #: 14-7726-054

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	123	15-33	20 mph	23 mph	16 - 25	114	93%	1% / 2	6% / 7

# Spot Speed Study

Segment #55: W 6th St.  
between L St. and A St.

City of Antioch

Survey Time: 1400-1515

Street Width: 38 Ft

DATE: 11/5/2014

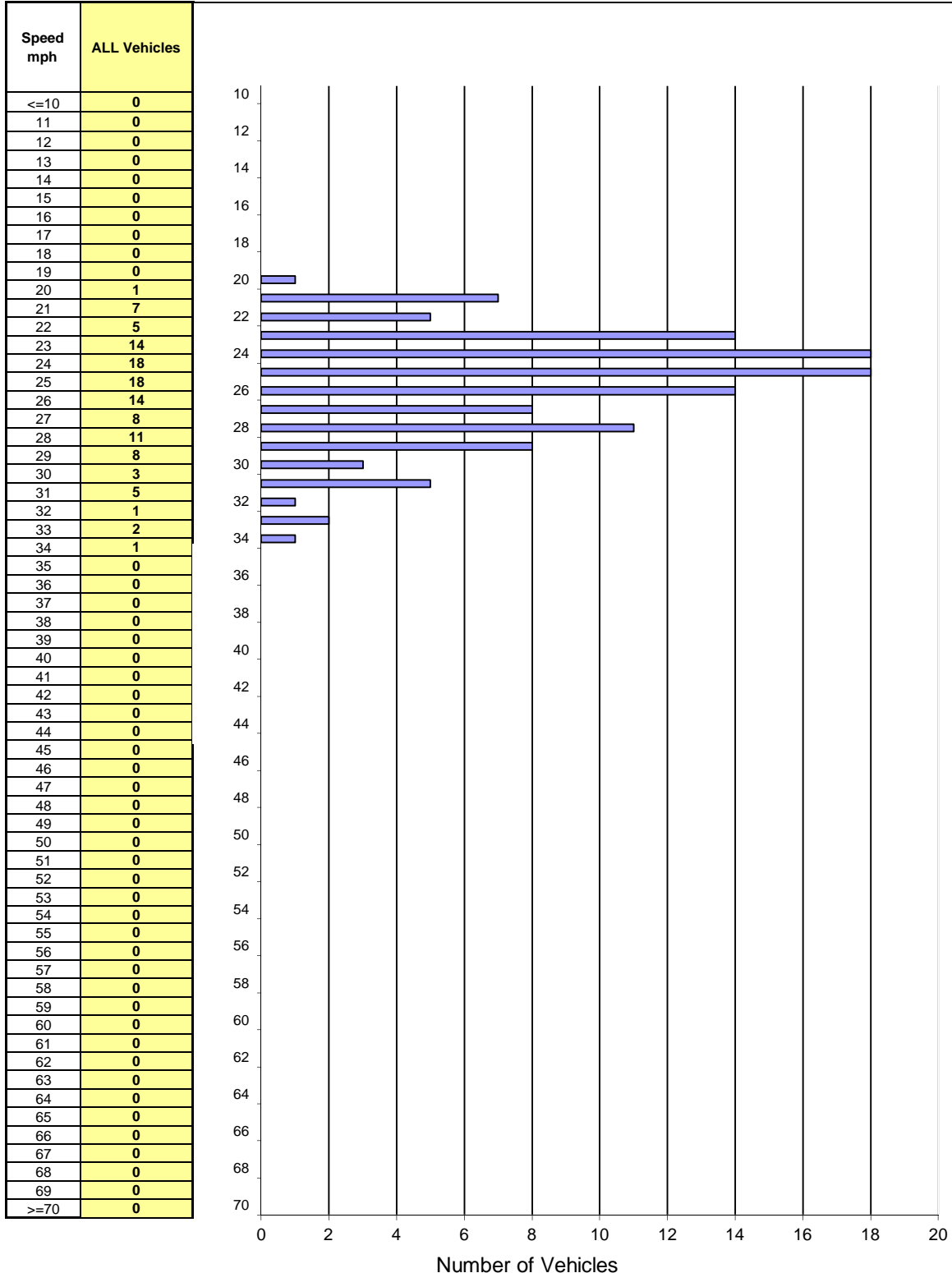
Location: 814 W. 6th Street

DAY: Wednesday

Posted Speed: 25 MPH

Project #: 14-7726-055

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	116	20-34	25 mph	29 mph	21 - 30	106	91%	0% / 1	8% / 9

# Spot Speed Study

Segment #56: Somersville Rd.  
between SR-4 and Buchanan Rd.

City of Antioch

Survey Time: 1245-1330

Street Width: 52 Ft

DATE: 11/25/2014

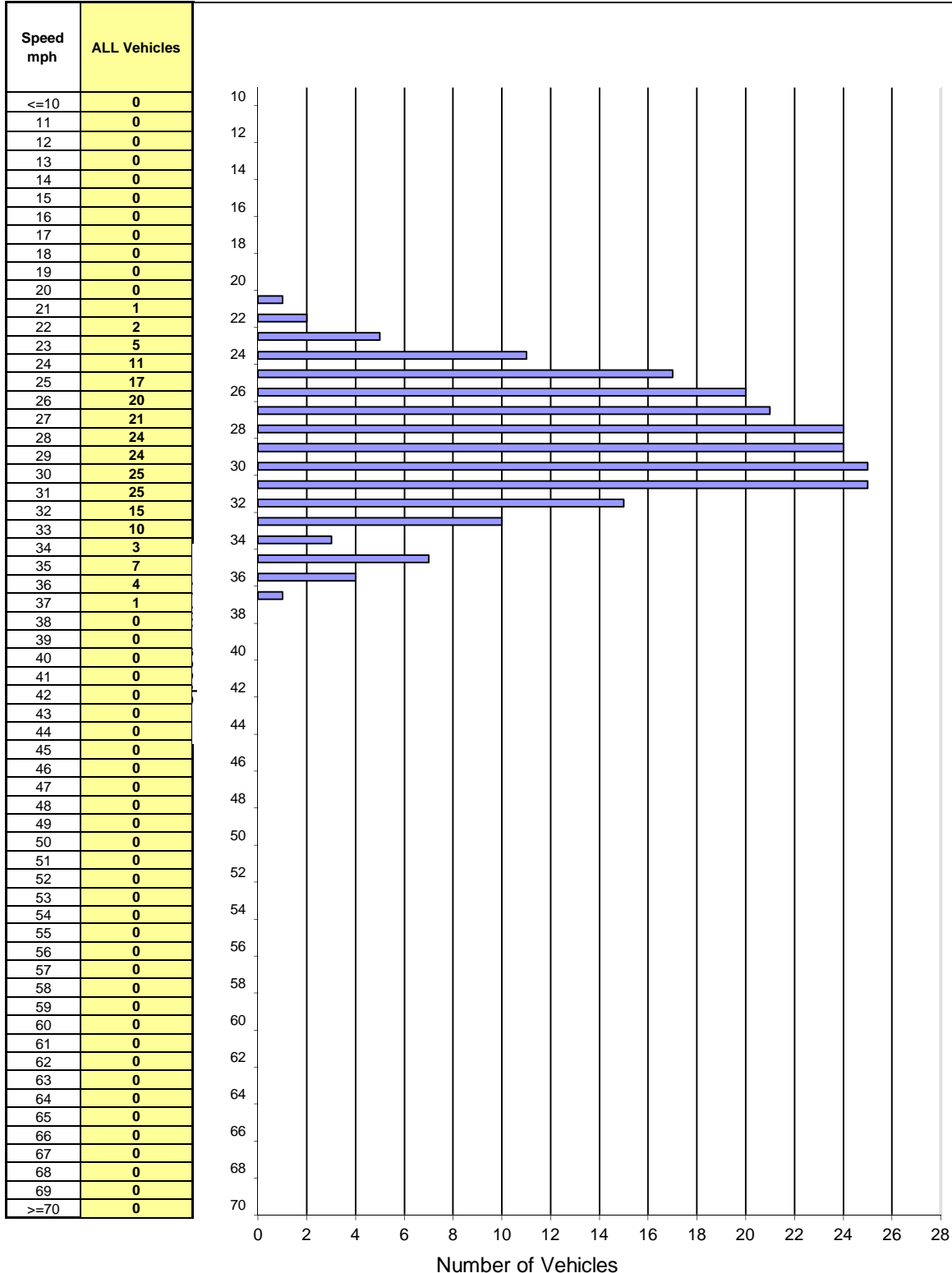
Location: 2548 Somersville Road

DAY: Tuesday

Posted Speed: 35 MPH

Project #: 14-7726-056

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	215	21-37	29 mph	32 mph	24 - 33	192	89%	3% / 8	7% / 15

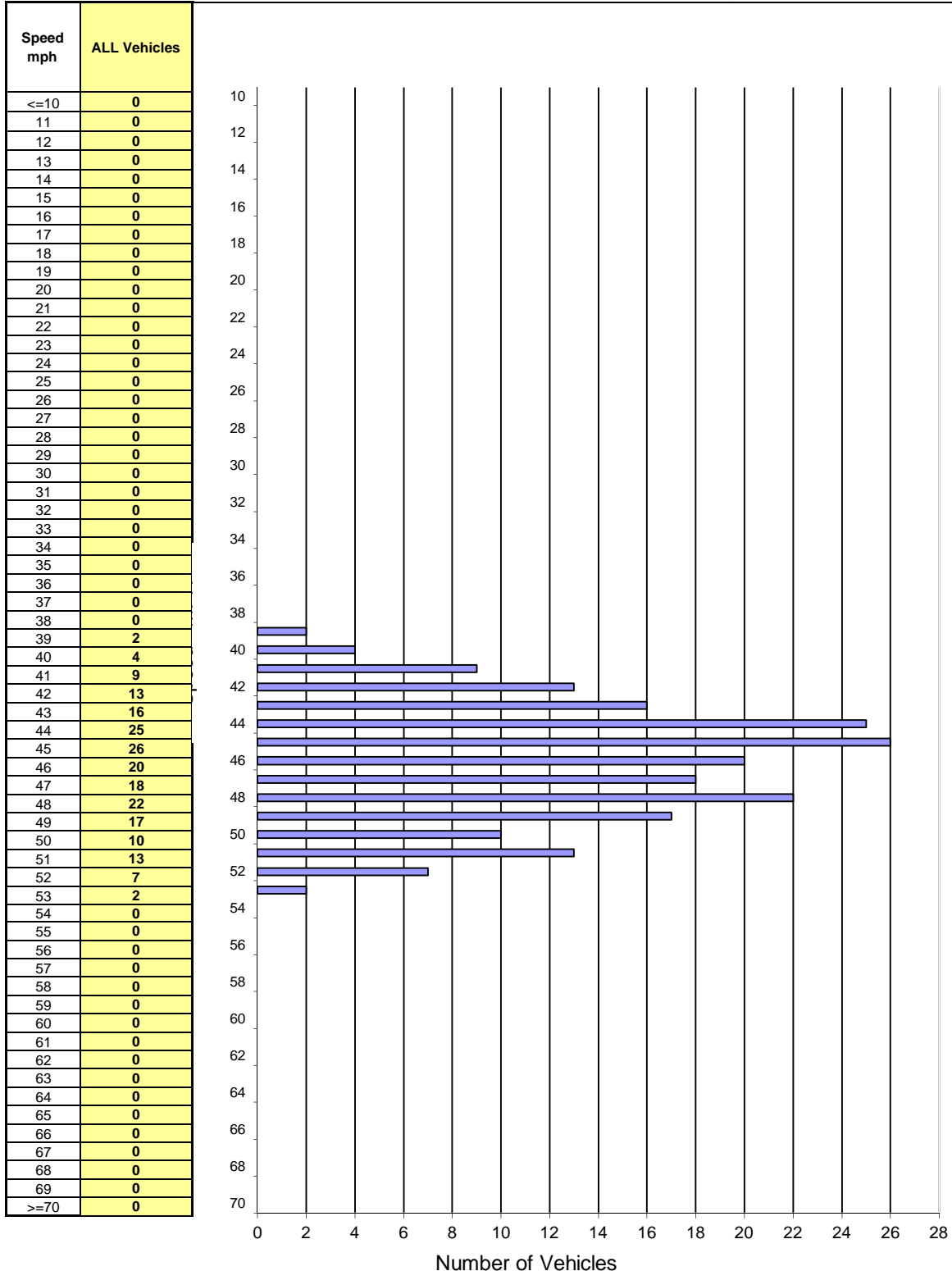
# Spot Speed Study

Segment #57: Somersville Rd.  
between Buchanan Rd. and James Donlon Blvd.

City of Antioch

Survey Time: 1340-1415 Street Width: 64 Ft  
DATE: 11/25/2014 Location: 3558 Somersville Road  
DAY: Tuesday Posted Speed: 35 MPH Project #: 14-7726-057

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	204	39-53	46 mph	50 mph	42 - 51	180	88%	7% / 15	5% / 9

# Spot Speed Study

Segment #58: W 10th St.  
between Auto Center Dr. and L St.

City of Antioch

Survey Time: 1210-1240

Street Width: 70 Ft

DATE: 11/6/2014

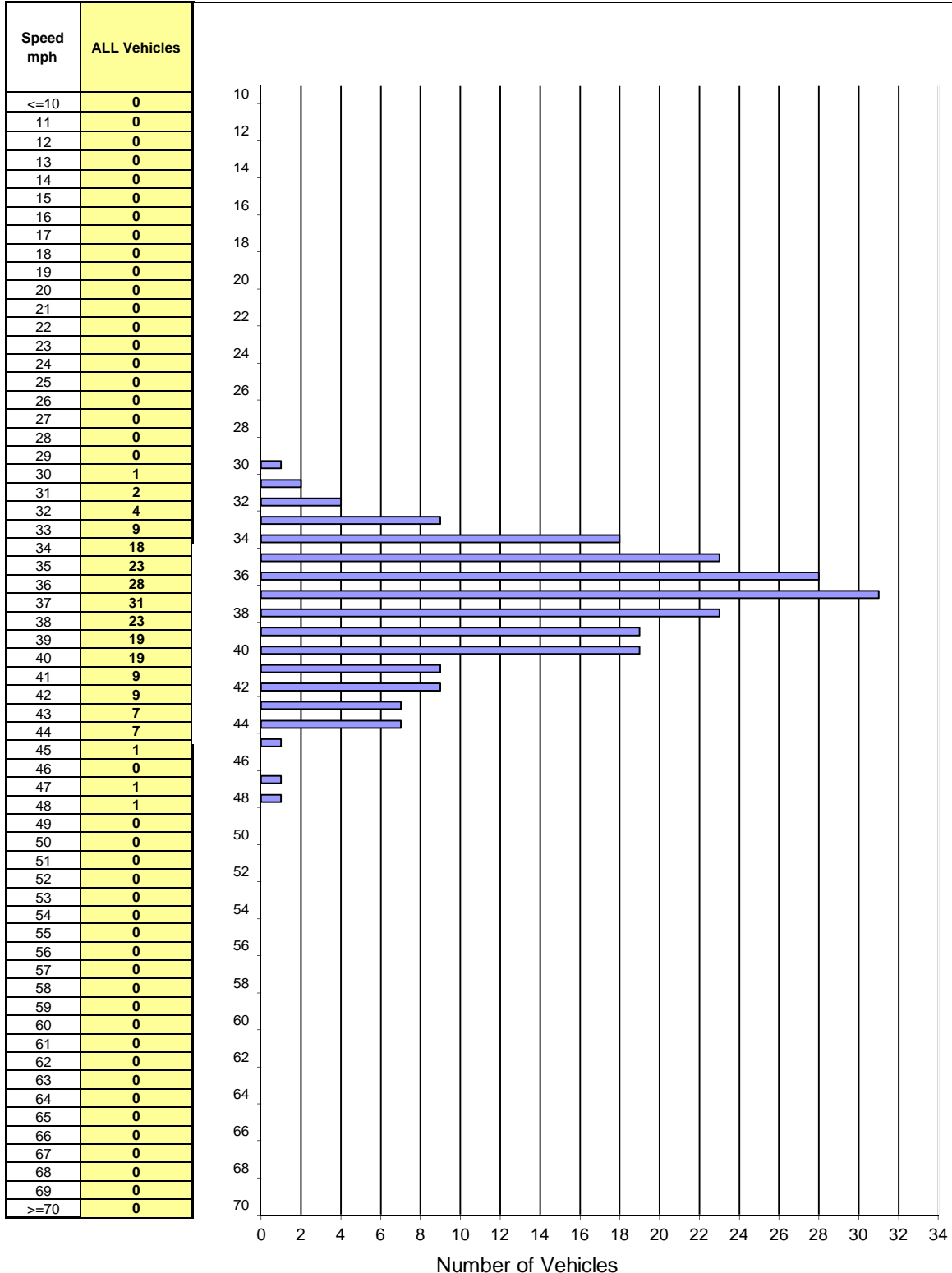
Location: 1212 West 10th Street

DAY: Thursday

Posted Speed: 35 MPH

Project #: 14-7726-058

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	212	30-48	37 mph	41 mph	33 - 42	188	89%	3% / 7	9% / 17

# Spot Speed Study

Segment #59: W. 10th St.  
between L St. and A St.

City of Antioch

Survey Time: 1455-1530

Street Width: 35 Ft

DATE: 11/6/2014

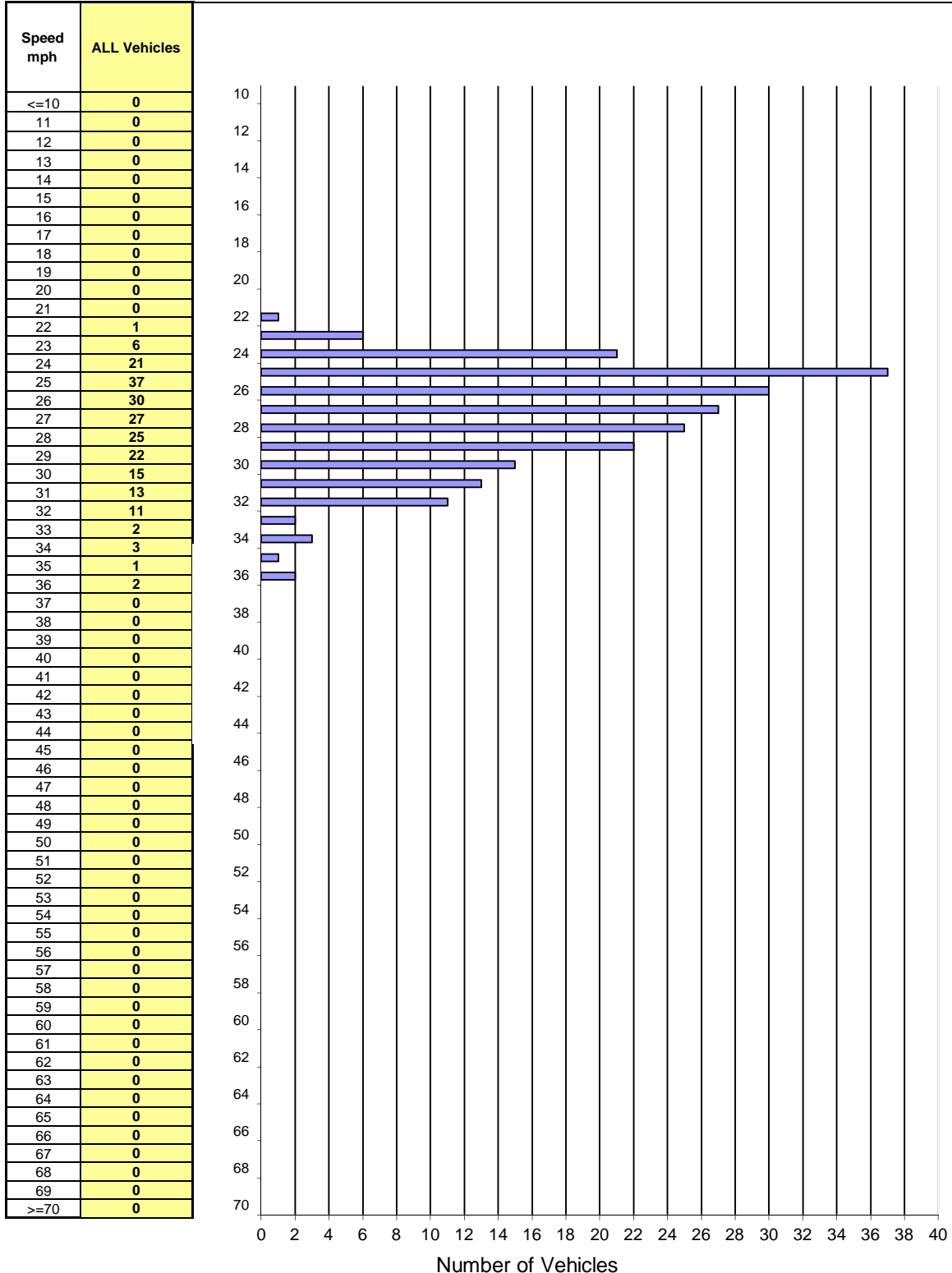
Location: 408 West 10th Street

DAY: Thursday

Posted Speed: 25 MPH

Project #: 14-7726-059

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	216	22-36	27 mph	30 mph	23 - 32	207	96%	0% / 1	4% / 8

# Spot Speed Study

Segment #60: E. Tregallas Rd.  
between Lone Tree Wy. and Garrow Dr.

City of Antioch

Survey Time: 1355-1430

Street Width: 29 Ft

DATE: 11/13/2014

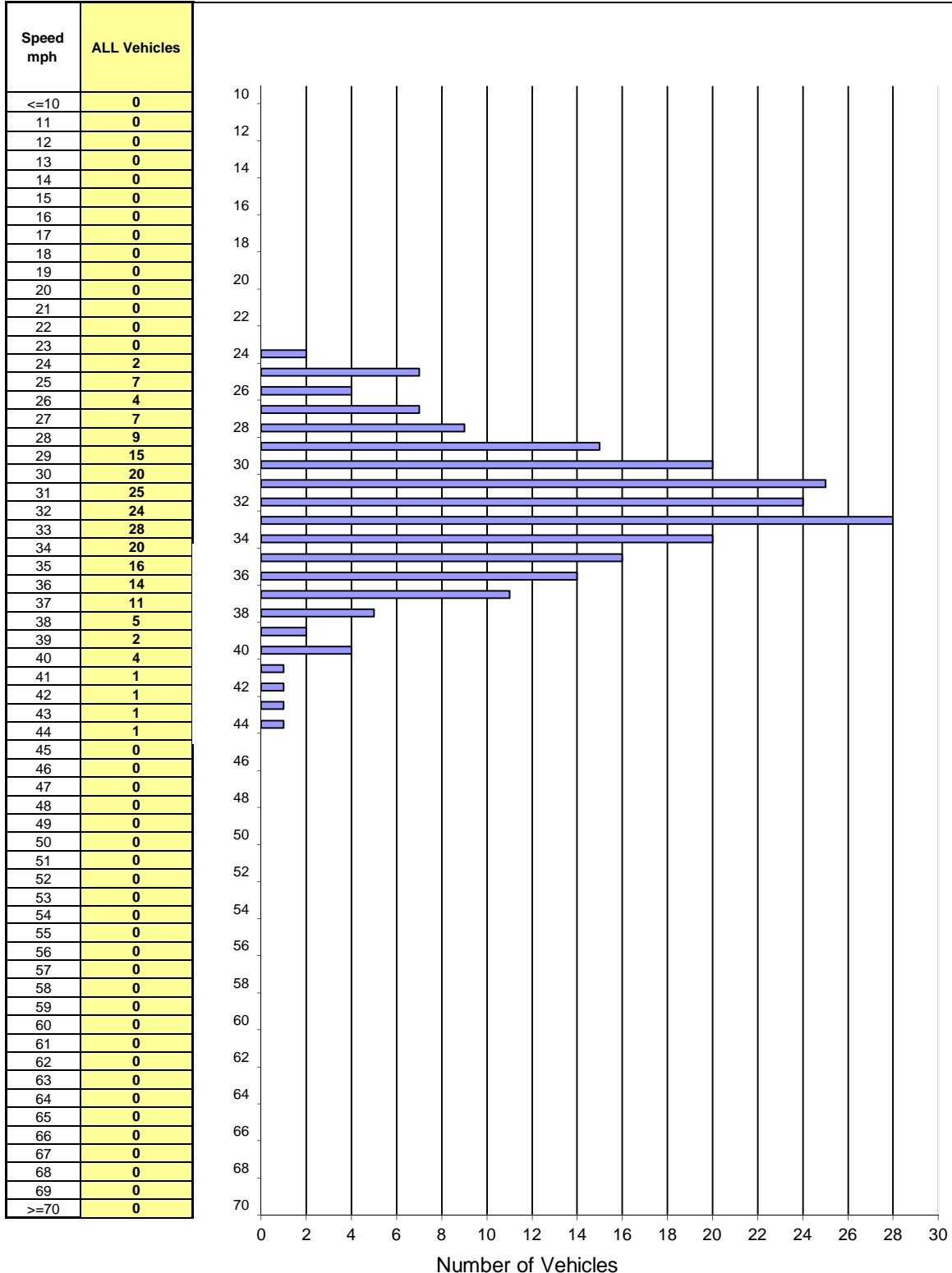
Location: 308 E. Tregallas Road

DAY: Thursday

Posted Speed: 25 MPH

Project #: 14-7726-060

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	217	24-44	32 mph	36 mph	28 - 37	182	84%	9% / 20	7% / 15



# Spot Speed Study

Segment #61: E. Tregallas Rd.  
between Garrow Dr. and Hillcrest Ave.

City of Antioch

Survey Time: 1440-1525

Street Width: 37 Ft

DATE: 11/13/2014

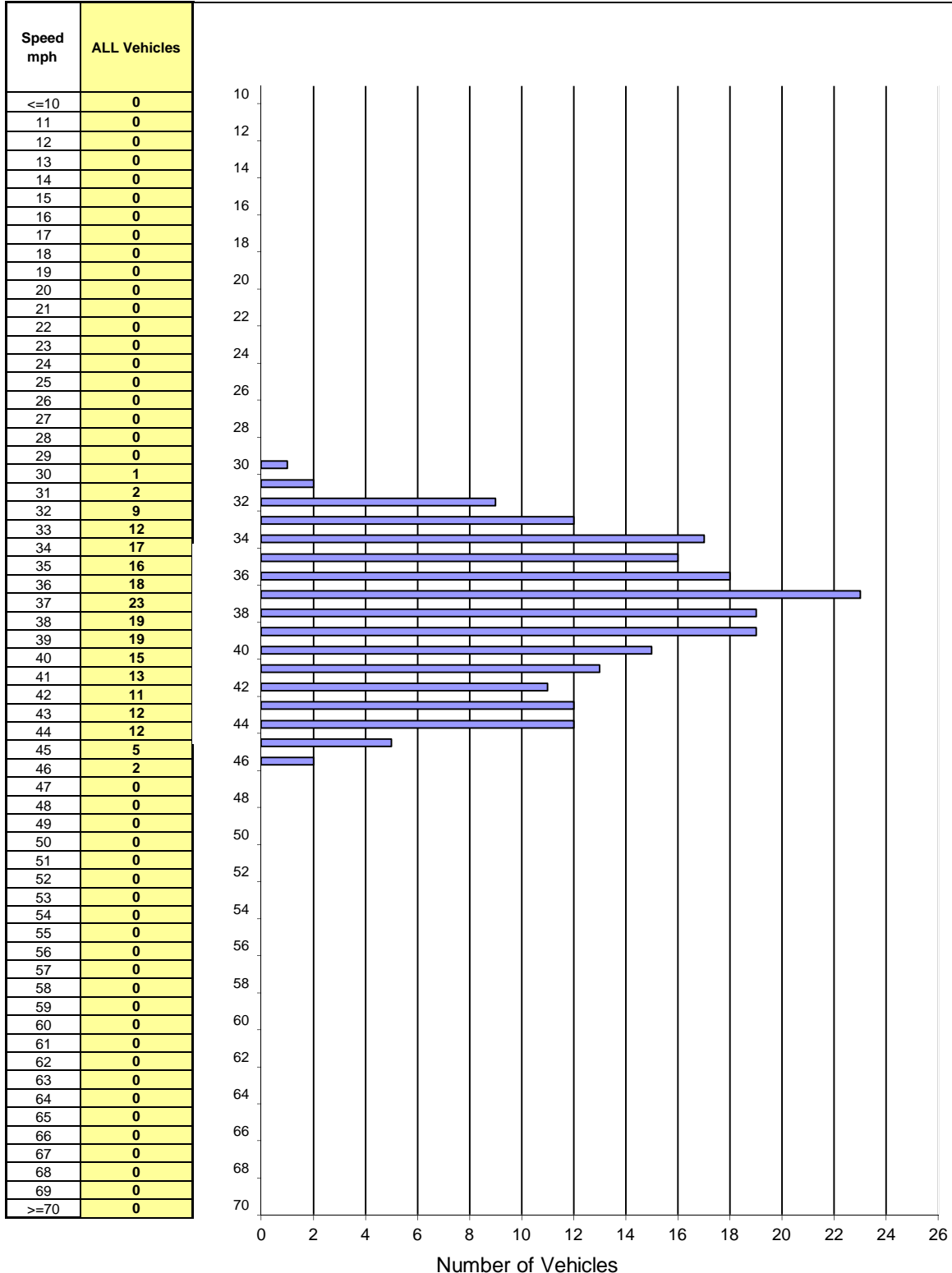
Location: E. Tregallas Road mib block between Harbour Drive and Windsor Drive

DAY: Thursday

Posted Speed: 35 MPH

Project #: 14-7726-061

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	206	30-46	38 mph	43 mph	33 - 42	163	79%	5% / 12	16% / 31

# Spot Speed Study

Segment #62: W. Tregallas Rd.  
between Garrow Dr. and Hillcrest Ave.

City of Antioch

Survey Time: 0900-0950

Street Width: 34 Ft

DATE: 11/14/2014

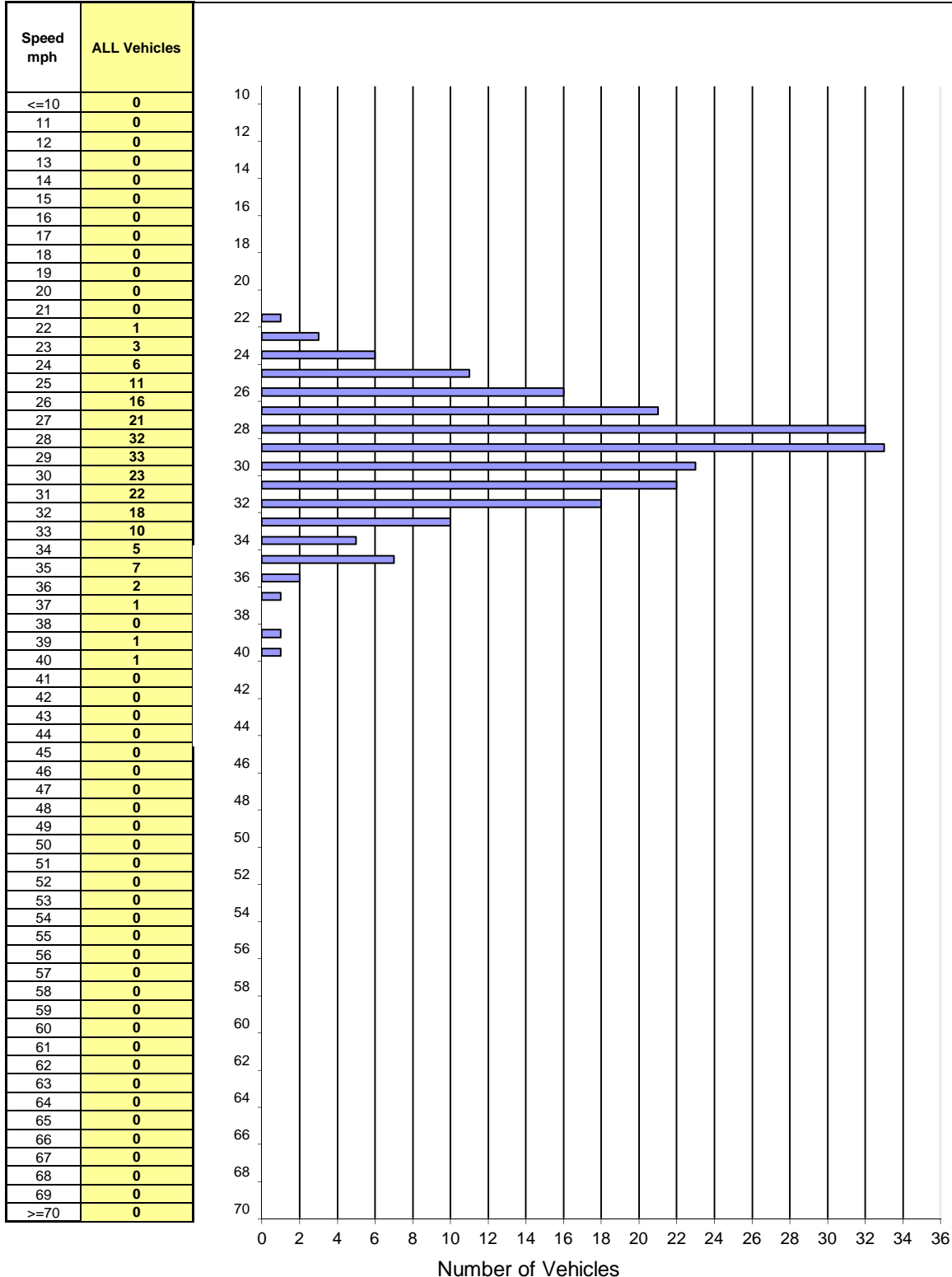
Location: 275 W. Tregallas Road

DAY: Friday

Posted Speed: 25 MPH

Project #: 14-7726-062

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	213	22-40	29 mph	32 mph	24 - 33	192	90%	1% / 4	8% / 17

# Spot Speed Study

Segment #63: Viera Ave.  
between A St. and Cavallo Rd.

City of Antioch

Survey Time: 0945-1130

Street Width: 30 Ft

DATE: 11/4/2014

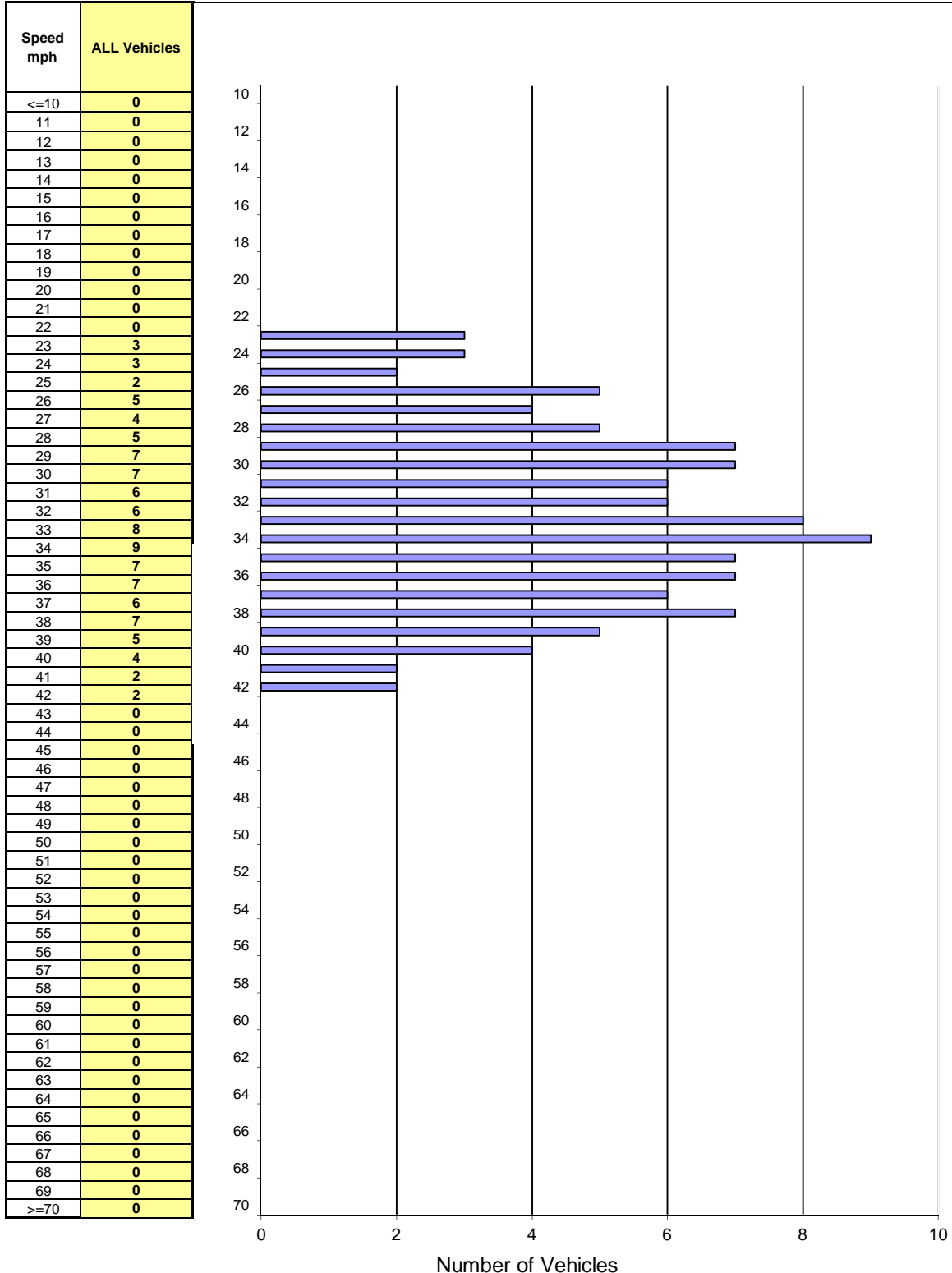
Location: 1509 Viera Avenue

DAY: Tuesday

Posted Speed: 25 MPH

Project #: 14-7726-063

## Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	105	23-42	33 mph	38 mph	29 - 38	70	67%	20% / 22	13% / 13

# Spot Speed Study

Segment #64: Wilbur Ave.  
between A St. and Cavallo Rd.

City of Antioch

Survey Time: 0900-0945

Street Width: 58 Ft

DATE: 11/5/2014

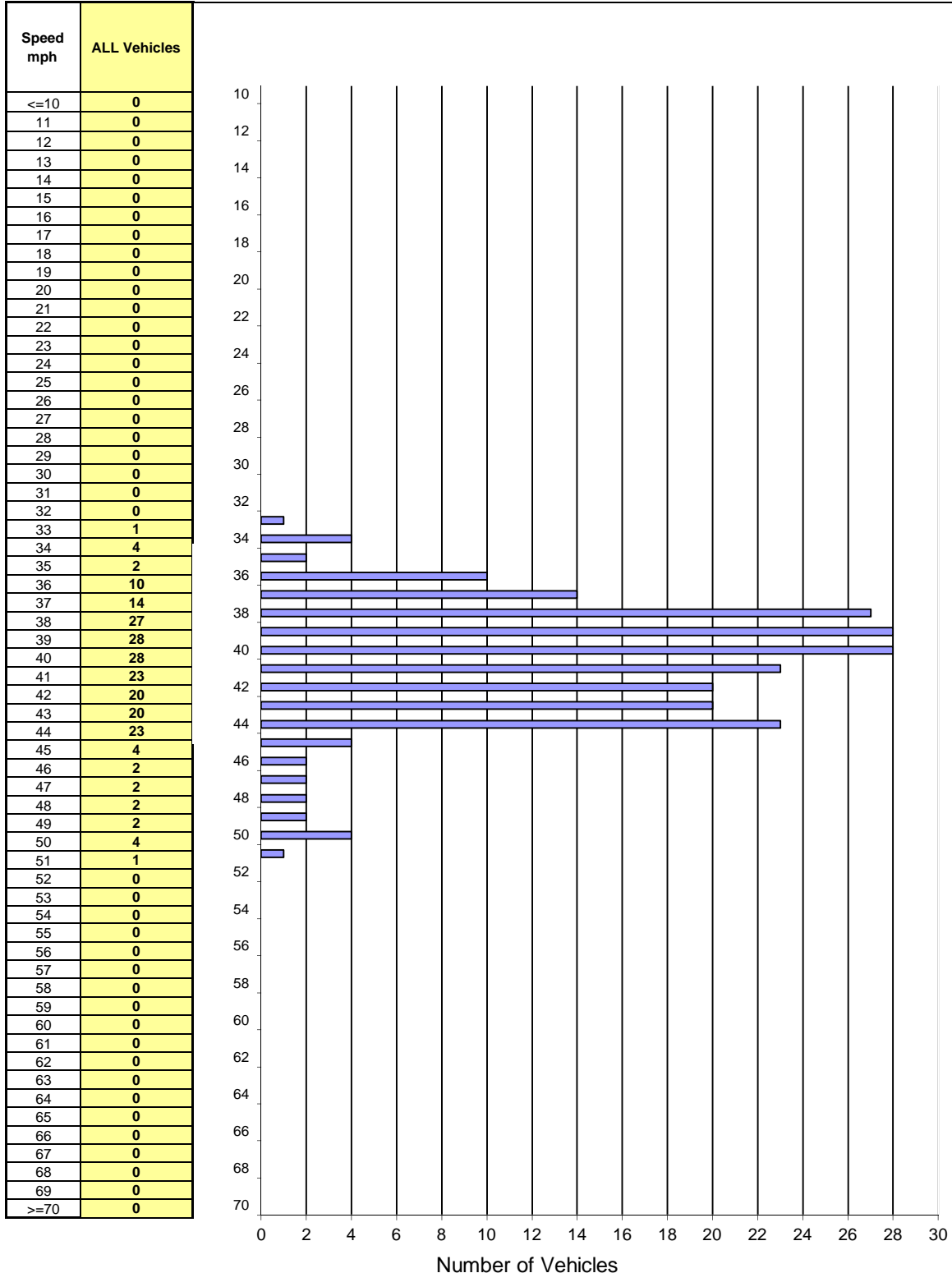
Location: 395 Wilbur Avenue

DAY: Wednesday

Posted Speed: 40 MPH

Project #: 14-7726-064

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	217	33-51	40 mph	44 mph	36 - 45	197	91%	3% / 7	6% / 13

# Spot Speed Study

Segment #65: Wilbur Ave.  
between Cavallo Rd. and 3100 ft. East of Cavallo Rd.

City of Antioch

Survey Time: 1410-1500

Street Width: 60 Ft

DATE: 11/4/2014

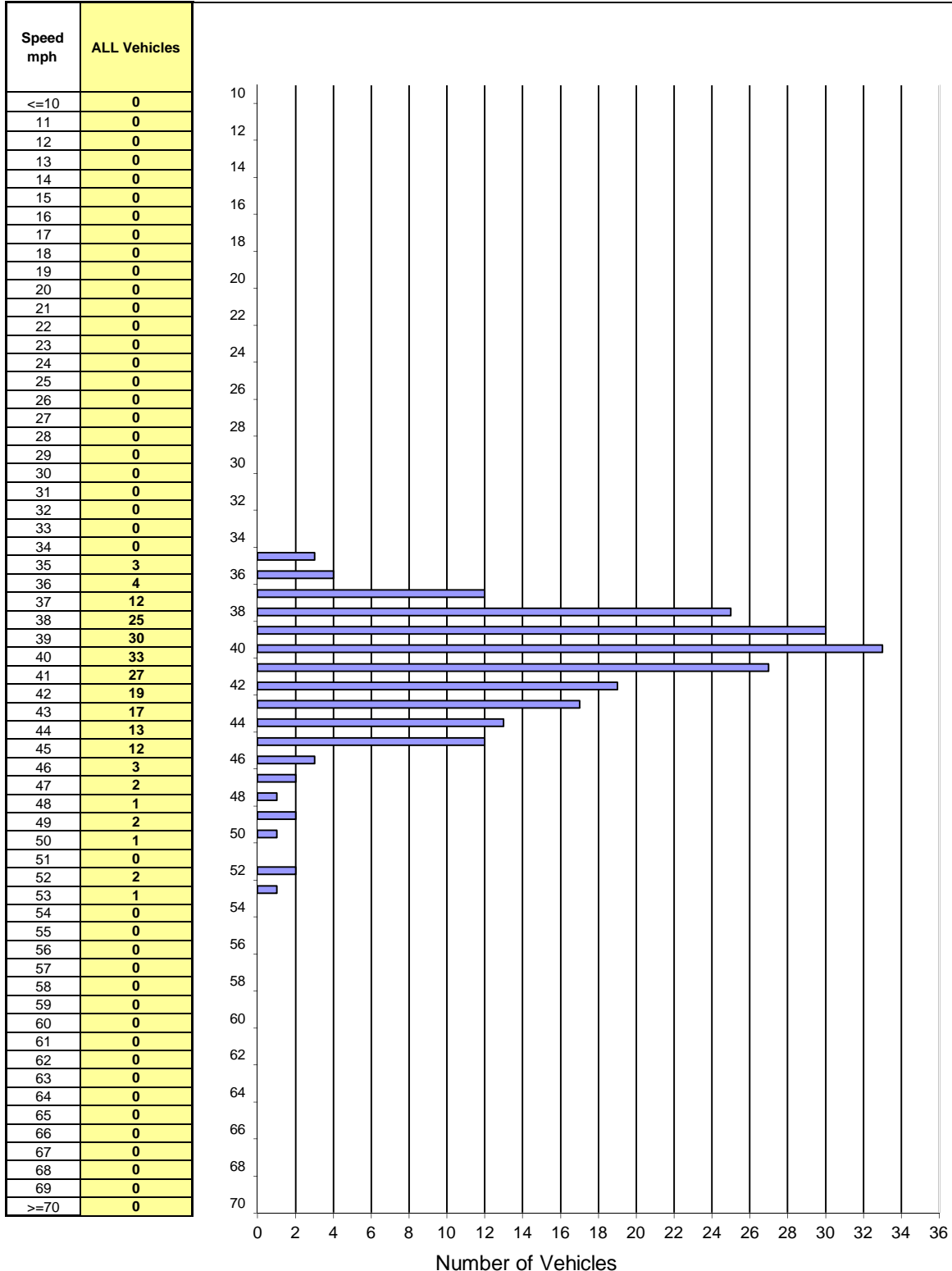
Location: Wilbur Avenue mid block between Cavallo Road and Minaker Drive

DAY: Tuesday

Posted Speed: 40 MPH

Project #: 14-7726-065

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	207	35-53	40 mph	44 mph	36 - 45	192	93%	1% / 3	6% / 12

# Spot Speed Study

Segment #66: Wilbur Ave.  
between 3100 ft. East of Cavallo Rd. and City Limits

City of Antioch

Survey Time: 1145-1240

Street Width: 37 Ft

DATE: 11/4/2014

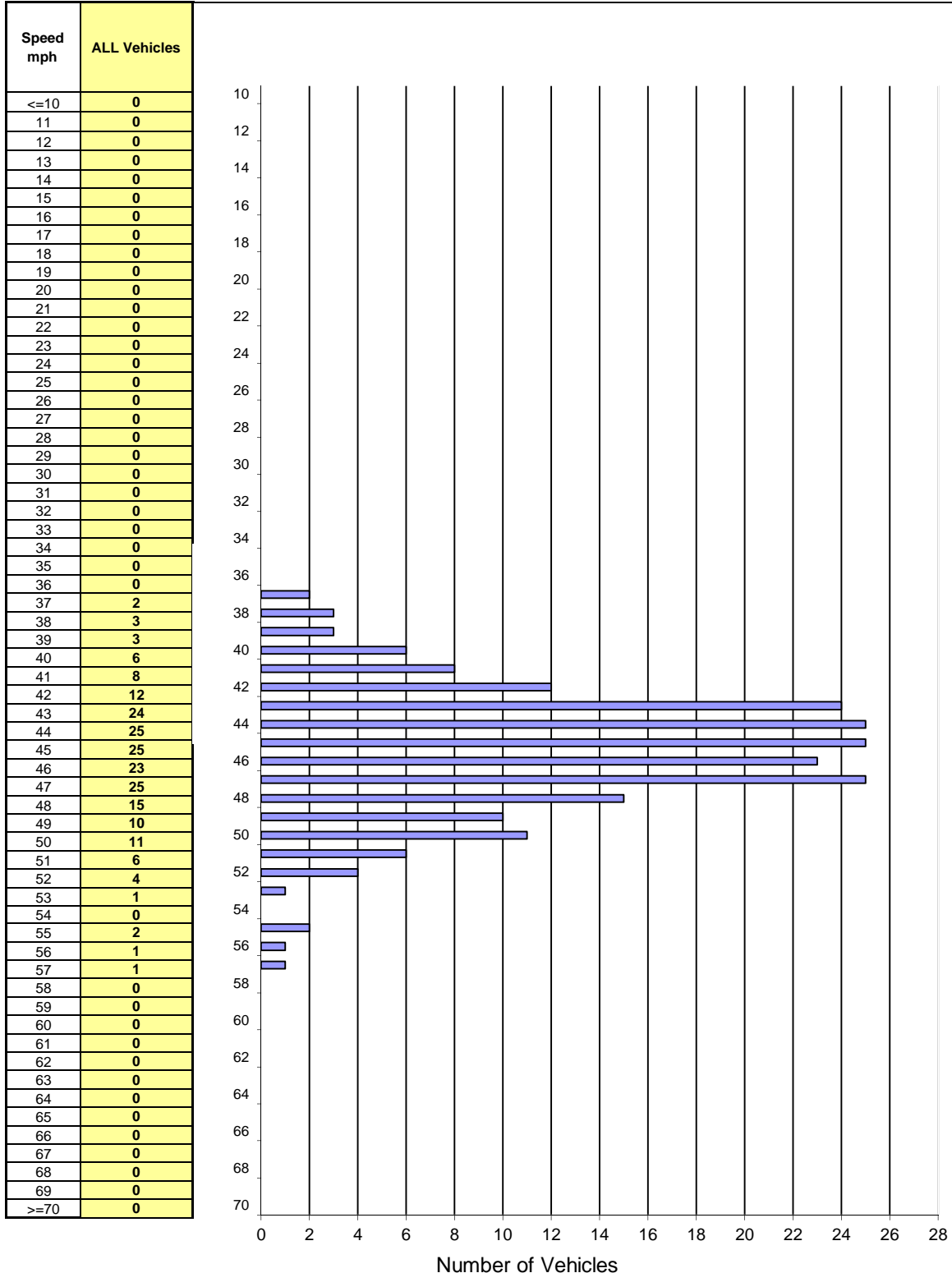
Location: 1253 Wilbur Avenue

DAY: Tuesday

Posted Speed: 45 MPH

Project #: 14-7726-066

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	207	37-57	45 mph	49 mph	41 - 50	178	86%	6% / 14	8% / 15

# Spot Speed Study

Segment #67: Wild Horse Rd.  
between Hillcrest Ave. and Slatten Ranch Rd.

City of Antioch

Survey Time: 1355-1535

Street Width: 48 Ft

DATE: 11/25/2014

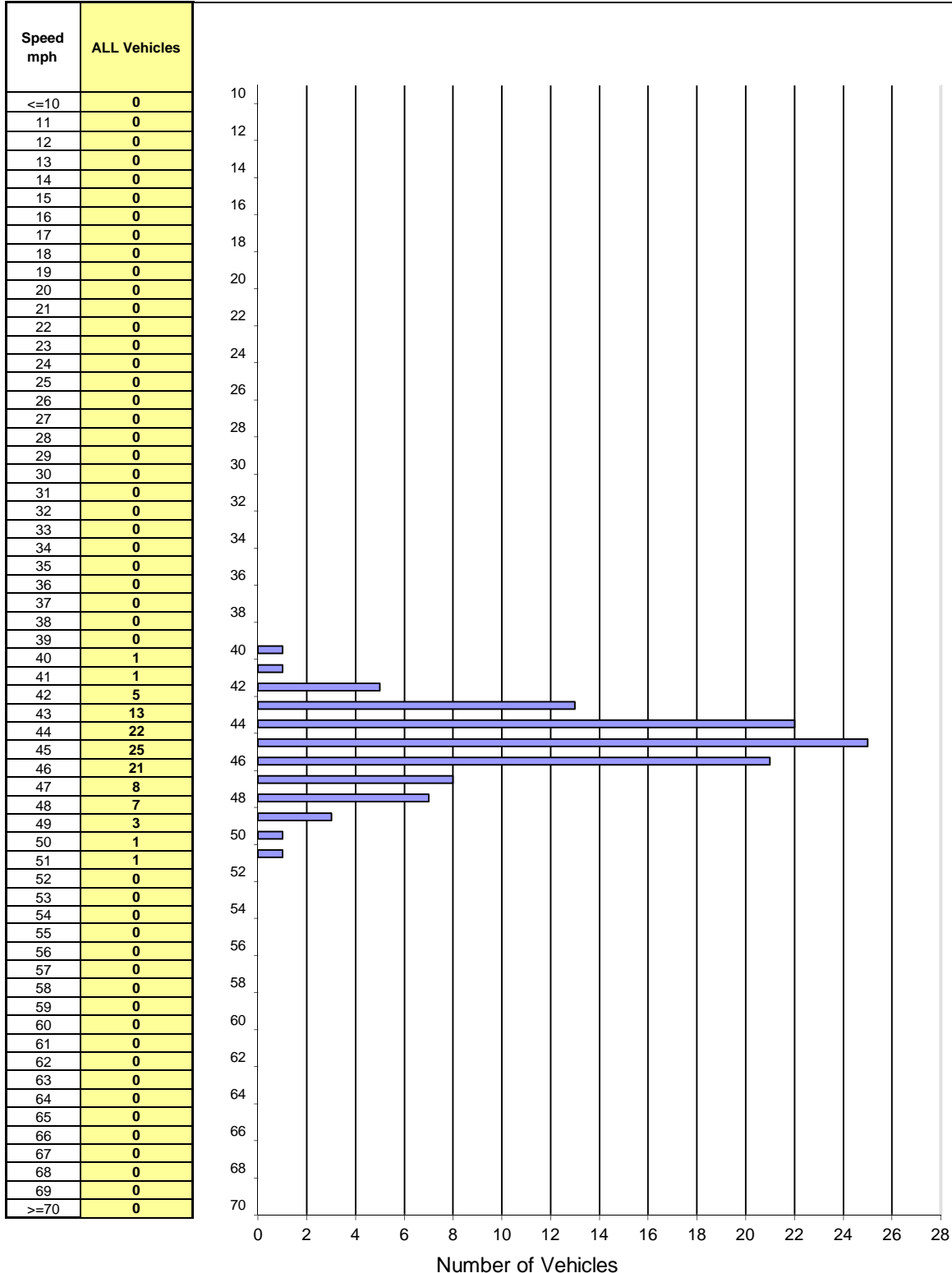
Location: Wilde Horse Road 400 feet west of Meadow Lake Street

DAY: Tuesday

Posted Speed: 45 MPH

Project #: 14-7726-067

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	108	40-51	45 mph	47 mph	40 - 49	106	98%	0% / 0	2% / 2

# Spot Speed Study

Segment #68: Worrell Rd.  
between Lone Tree Wy. and Garrow Dr.

City of Antioch

Survey Time: 1315-1500

Street Width: 36 Ft

DATE: 11/21/2014

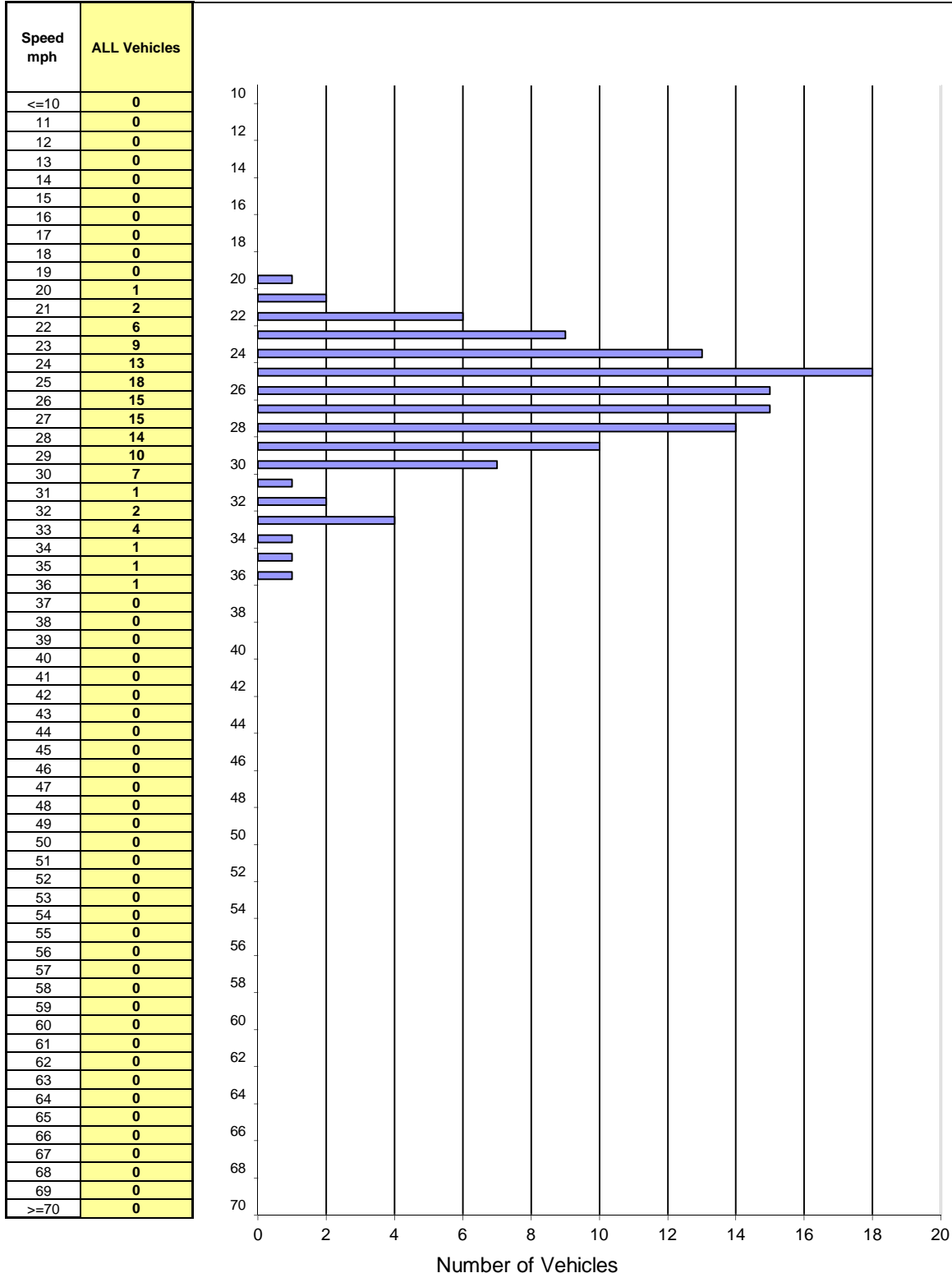
Location: 32 Worrell Road

DAY: Friday

Posted Speed: 25 MPH

Project #: 14-7726-068

## Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	120	20-36	26 mph	29 mph	21 - 30	109	91%	0% / 1	9% / 10





## Appendix B – Recommended Speed Survey Summary



City of Antioch  
2014 Engineering and Traffic Survey

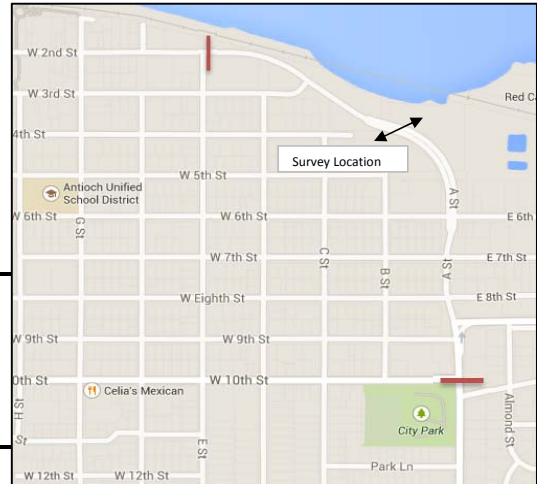


**Street:** A Street  
**Limits:** A Street from E Street to 10th Street  
**Direction:** EB/WB

**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	710 A Street (11/6/2014)
Posted Speed Limit (mph)	25
# Speed Data Collected	215
85th Percentile (mph)	28
10 mph Pace	22 - 31
Percent in Pace	94%



**B. Traffic Factors**

Average Daily Traffic (ADT)	4,616
Length of Segment (mi.)	0.57
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	13
Accident Rate (Acc/MVM)	2.7
Statewide Average Accident Rate	1.78

**D. Roadway Conditions**

Adjacent Land Use	Location is adjacent to several residential houses and a few restaurants. Location is vacant at the north side, and is adjacent to a park at south side.
Roadway Geometrics	Between 4th St and 6th St, two lanes with a curve and with median only at the curve. North end before the curve has on-street parking in both directions. Colored crosswalk at the intersection of A St & 6th St.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate.

Speed Limit Change? **No**

**Existing Speed Limit: 25 mph**

**Recommended Speed Limit: 25 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE

**Title:** Vice President, TJKM Transportation Consultants



City of Antioch  
2014 Engineering and Traffic Survey

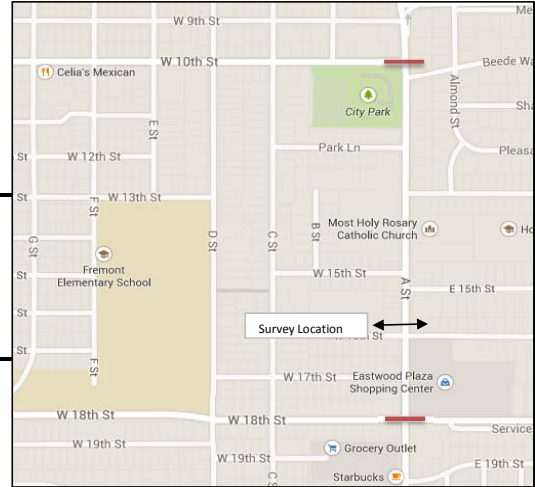
**Street:** A Street  
**Limits:** A Street from 10th Street to 18th Street  
**Direction:** NB/SB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	1513 A Street (11/19/2014)
Posted Speed Limit (mph)	30
# Speed Data Collected	210
85th Percentile (mph)	34
10 mph Pace	27 - 36
Percent in Pace	92%



**B. Traffic Factors**

Average Daily Traffic (ADT)	15,298
Length of Segment (mi.)	0.43
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	35
Accident Rate (Acc/MVM)	2.89
Statewide Average Accident Rate	2.47

**D. Roadway Conditions**

Adjacent Land Use	Mixed residential and commercial land usage. Two schools, a city park, a hospital, a church, a mortuary and four commercial squares located nearby.
Roadway Geometrics	Four lanes undivided with shared on-street parking in both directions. Between 16th St and 18th St, no on-street parking available. Schools are located near the intersection of A St & 15th St. Yellow pedestrian crossing at A St & 15th St.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 30 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate and proximity of schools.

Speed Limit Change? **No**

**Existing Speed Limit: 30 mph**

**Recommended Speed Limit: 30 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:


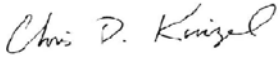

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE

**Title:** Vice President, TJKM Transportation Consultants



City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	A Street	
<b>Limits:</b>	A Street from 18th Street to SR4	
<b>Direction:</b>	NB/SB	
<b>Factors</b>		
<b>A. Prevailing Speed Data</b>		
Date /Location of Survey	1927 A Street (11/19/2014)	
Posted Speed Limit (mph)	30	
# Speed Data Collected	211	
85th Percentile (mph)	34	
10 mph Pace	26 - 35	
Percent in Pace	93%	
<b>B. Traffic Factors</b>		
Average Daily Traffic (ADT)	23,632	
Length of Segment (mi.)	0.47	
Street Classification	Arterial	
<b>C. Collision History</b>		
Date Range Covered	Jan 09 - Dec 13	
Total Accidents	67	
Accident Rate (Acc/MVM)	3.31	
Statewide Average Accident Rate	2.47	
<b>D. Roadway Conditions</b>		
Adjacent Land Use	Generally commercial and residential with a animal hospital and church located nearby.	
Roadway Geometrics	Four lanes undivided with shared on-street parking in both directions between 18th St & Railroad Ave. Railroad tracks close to Railroad Ave. 4 lane divided roadway from Railroad Ave to SR 4 with no on street parking. Class II bike lane available between Bryan Ave and SR4.	
Comments	Results of attached engineering & traffic survey information support maintaining the existing 30 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate.	
Speed Limit Change?	<b>No</b>	
<b>Existing Speed Limit: 30 mph</b>	<b>Recommended Speed Limit: 30 mph</b>	
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;"> <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> <div style="text-align: center;">  </div> </div>		

City of Antioch  
2014 Engineering and Traffic Survey

**Street:** Auto Center Drive  
**Limits:** Auto Center Drive from 4th Street to 10th Street  
**Direction:** NB/SB



**Factors**

**A. Prevailing Speed Data**

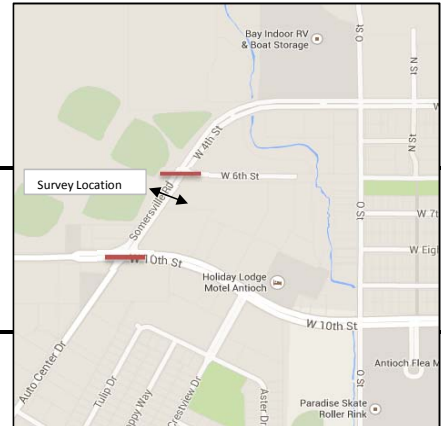
Date /Location of Survey	Auto Center Drive mid block between 10th Street and 6th Street (11/10/2014)
Posted Speed Limit (mph)	35
# Speed Data Collected	144
85th Percentile (mph)	39
10 mph Pace	32 - 41
Percent in Pace	91%

**B. Traffic Factors**

Average Daily Traffic (ADT)	4,497
Length of Segment (mi.)	0.44
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	7
Accident Rate (Acc/MVM)	1.95
Statewide Average Accident Rate	1.83



**D. Roadway Conditions**

Adjacent Land Use	Location is generally commercial and residential on the south and mostly vacant parcel of the land on the north west side of the roadway segment.
Roadway Geometrics	Four lanes with median.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate.

Speed Limit Change? **No**

**Existing Speed Limit: 35 mph**

**Recommended Speed Limit: 35 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE

**Title:** Vice President, TJKM Transportation Consultants



City of Antioch  
2014 Engineering and Traffic Survey

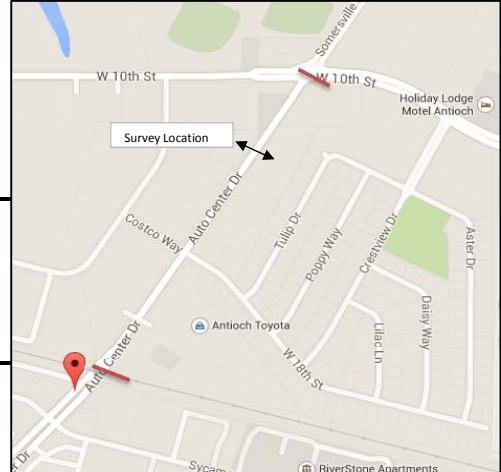
**Street:** Auto Center Drive  
**Limits:** Auto Center Drive from 10th Street to SPRR  
**Direction:** NB/SB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	1553 Auto Center Drive (11/7/2014)
Posted Speed Limit (mph)	35
# Speed Data Collected	189
85th Percentile (mph)	37
10 mph Pace	31 - 40
Percent in Pace	98%



**B. Traffic Factors**

Average Daily Traffic (ADT)	10,863
Length of Segment (mi.)	0.42
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	11
Accident Rate (Acc/MVM)	1.31
Statewide Average Accident Rate	2.47

**D. Roadway Conditions**

Adjacent Land Use	Location is generally commercial with several car dealerships between Costco Way & SPRR. A residential apartment building is observed adjacent to the location.
Roadway Geometrics	Four Lane undivided, until 150 ft from RR tracks. After then with median until RR tracks.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit.

Speed Limit Change? **No**

**Existing Speed Limit: 35 mph**

**Recommended Speed Limit: 35 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE

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City of Antioch  
2014 Engineering and Traffic Survey

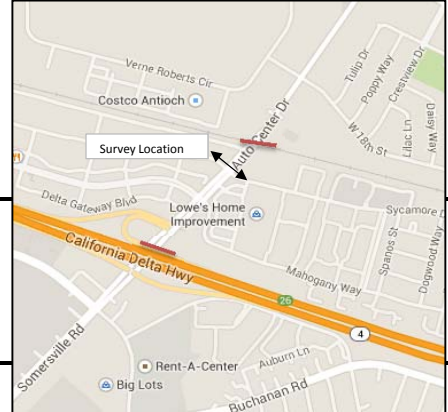
**Street:** Auto Center Drive  
**Limits:** Auto Center Drive from SPRR to SR4  
**Direction:** NB/SB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	1865 Auto Center Drive (11/25/2014)
Posted Speed Limit (mph)	35
# Speed Data Collected	209
85th Percentile (mph)	37
10 mph Pace	31 - 40
Percent in Pace	94%



**B. Traffic Factors**

Average Daily Traffic (ADT)	21,339
Length of Segment (mi.)	0.33
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	14
Accident Rate (Acc/MVM)	1.1
Statewide Average Accident Rate	1.83

**D. Roadway Conditions**

Adjacent Land Use	Location is general commercial with a plaza and two shopping centers on each side. A residential apartment building is observed close to SR4.
Roadway Geometrics	6 Lane Divided roadway
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit.

Speed Limit Change? **No**

**Existing Speed Limit: 35 mph**

**Recommended Speed Limit: 35 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE

**Title:** Vice President, TJKM Transportation Consultants



City of Antioch  
2014 Engineering and Traffic Survey

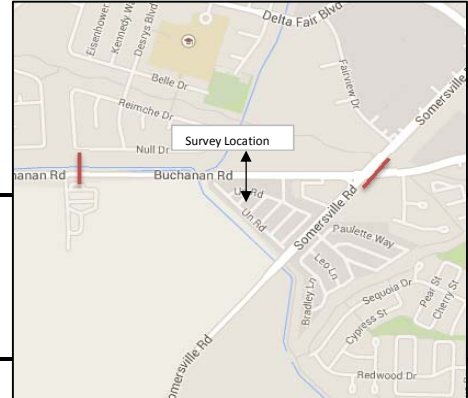
**Street:** Buchanan Road  
**Limits:** Buchanan Road from City Limits to Somersville Road  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	1784 Buchanan Road (11/17/2014)
Posted Speed Limit (mph)	45
# Speed Data Collected	217
85th Percentile (mph)	52
10 mph Pace	44-53
Percent in Pace	88%



**B. Traffic Factors**

Average Daily Traffic (ADT)	18,526
Length of Segment (mi.)	0.64
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	12
Accident Rate (Acc/MVM)	0.55
Statewide Average Accident Rate	1.78

**D. Roadway Conditions**

Adjacent Land Use	Location is mostly vacant, with a small proportion of residential houses on the northeast side.
Roadway Geometrics	Two lanes undivided with Class II bike lanes in both directions. Around 1,500 ft from the city limit, eastbound divided into two lanes until Somersville Rd.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 45 mph speed limit by downgrading the 85th percentile speed by 5mph due to the 10 mph pace.

Speed Limit Change? **No**

**Existing Speed Limit: 45 mph**

**Recommended Speed Limit: 45 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:

*Chris D. Kinzel*



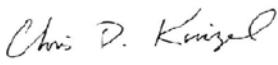

**Signed:** Chris D. Kinzel, PE

**Title:** Vice President, TJKM Transportation Consultants





City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Buchanan Road			
<b>Limits:</b>	Buchanan Road from Somersville Road to Gentrytown Drive			
<b>Direction:</b>	EB/WB			
<b>Factors</b>				
<b>A. Prevailing Speed Data</b>				
Date /Location of Survey	2388 Buchanan Road (11/17/2014)			
Posted Speed Limit (mph)	35			
# Speed Data Collected	206			
85th Percentile (mph)	39			
10 mph Pace	33 - 42			
Percent in Pace	95%			
				
			<b>B. Traffic Factors</b>	
			Average Daily Traffic (ADT)	9,971
			Length of Segment (mi.)	0.34
<b>C. Collision History</b>				
Date Range Covered	Jan 09 - Dec 13			
Total Accidents	21			
Accident Rate (Acc/MVM)	3.37			
Statewide Average Accident Rate	1.83			
<b>D. Roadway Conditions</b>				
Adjacent Land Use	Location is generally commercial and residential, with a hospital and a shopping center.			
Roadway Geometrics	Four lanes with median. Class II bike lane in eastbound direction.			
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit and downgrading the 85th percentile speed by 5mph due to the high accident rate.			
Speed Limit Change?	<b>No</b>			
<b>Existing Speed Limit: 35 mph</b>	<b>Recommended Speed Limit: 35 mph</b>			
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;">  <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> </div>				

City of Antioch  
2014 Engineering and Traffic Survey

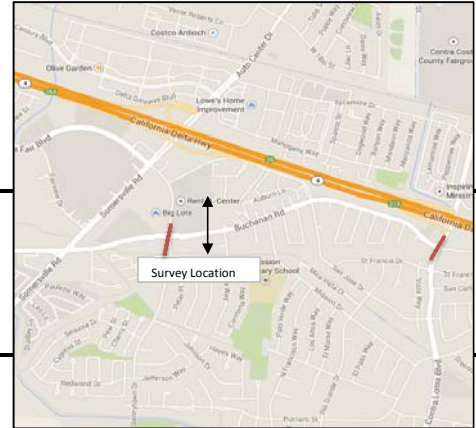
**Street:** Buchanan Road  
**Limits:** Buchanan Road from Gentrytown Drive to Contra Loma Blvd  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	1304 Buchanan Road (11/7/2014)
Posted Speed Limit (mph)	35
# Speed Data Collected	221
85th Percentile (mph)	41
10 mph Pace	33 - 42
Percent in Pace	91%



**B. Traffic Factors**

Average Daily Traffic (ADT)	12,654
Length of Segment (mi.)	0.93
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	30
Accident Rate (Acc/MVM)	1.4
Statewide Average Accident Rate	1.83

**D. Roadway Conditions**

Adjacent Land Use	Location is generally residential, with one church and a UPS store.
Roadway Geometrics	Four lanes with median and horizontal and vertical curve. Bike lane on both sides. Yellow colored crosswalk at Mission Dr.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit to downgrading the 85th percentile speed by 5mph due to the 10 mph pace.

Speed Limit Change? **No**

**Existing Speed Limit: 35 mph**

**Recommended Speed Limit: 35 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:


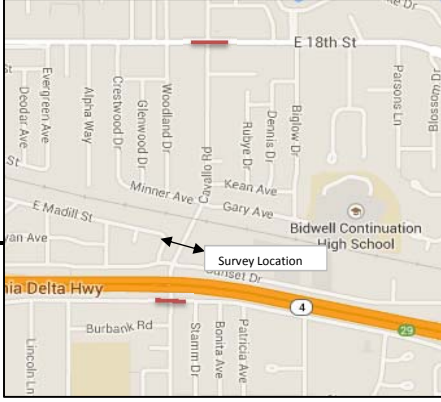
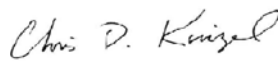

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE


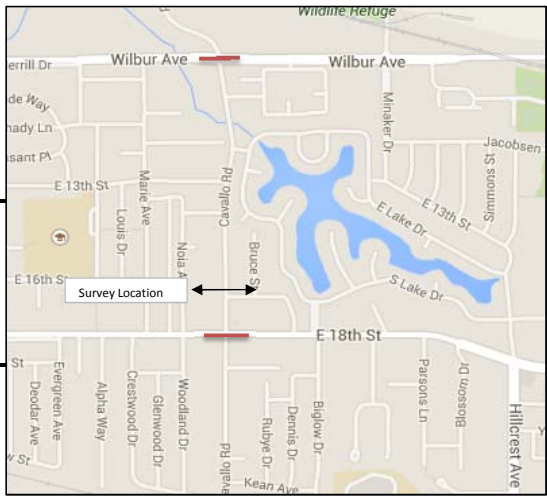
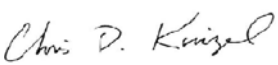

**Title:** Vice President, TJKM Transportation Consultants




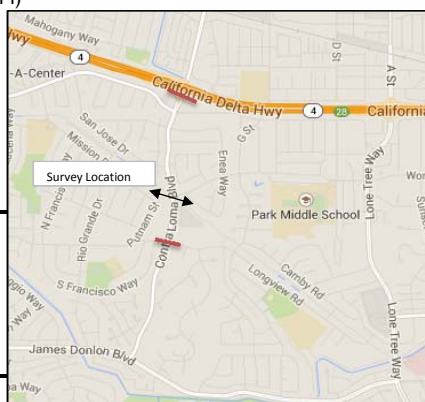
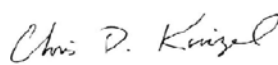

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Cavallo Road		
<b>Limits:</b>	Cavallo Road from E Tregallas Road to 18th Street		
<b>Direction:</b>	NB/SB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	1930 Cavallo Road (11/10/2014)		
Posted Speed Limit (mph)	25		
# Speed Data Collected	123		
85th Percentile (mph)	35		
10 mph Pace	26 - 35		
Percent in Pace	80%		
			
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	6,218		
Length of Segment (mi.)	0.51		
Street Classification	Collector		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	18		
Accident Rate (Acc/MVM)	3.10		
Statewide Average Accident Rate	1.78		
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is generally residential.		
Roadway Geometrics	Two lane undivided (double yellow center line) with shared on-street parking on each side. At the south side of Cavallo Road there is a overhead highway bridge. Yellow pedestrian crossing at Tregallas Rd and Sunset Dr.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit due to the residential density, associated pedestrian and bike activities, and high accident rate.		
Speed Limit Change?			
<b>Existing Speed Limit: 25 mph</b>		<b>Recommended Speed Limit: 25 mph</b>	
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">   <b>Signed:</b> Chris D. Kinzel, PE         </div> <div style="text-align: center;"> <b>Title:</b> Vice President, TJKM Transportation Consultants         </div> <div style="text-align: center;">  </div> </div>			

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Cavallo Road	
<b>Limits:</b>	Cavallo Road from Wilbur Avenue to 18th Street	
<b>Direction:</b>	NB/SB	
<b>Factors</b>		
<b>A. Prevailing Speed Data</b>		
Date /Location of Survey	1625 Cavallo Road (11/10/2014)	
Posted Speed Limit	35	
# Speed Data Collected	214	
85th Percentile	39	
10 mph Pace	32 - 41	
Percent in Pace	88%	
<b>B. Traffic Factors</b>		
Average Daily Traffic (ADT)	5,747	
Length of Segment (mi.)	0.51	
Street Classification	Collector	
<b>C. Collision History</b>		
Date Range Covered	Jan 09 - Dec 13	
Total Accidents	22	
Accident Rate (Acc/MVM)	4.07	
Statewide Average Accident Rate	2.47	
		
<b>D. Roadway Conditions</b>		
Adjacent Land Use	Location is generally residential with school and a church located nearby. Vacant land on northwest of Cavallo Rd	
Roadway Geometrics	Four lanes undivided with shared on-street parking on south bound direction, from 13th Street to Wilbur Avenue bike lanes in both directions .Yellow Pedestrian crossing can be observed at intersection at 13th Street and Cavallo Road.	
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate.	
Speed Limit Change?	<b>No</b>	
<b>Existing Speed Limit: 35 mph</b>	<b>Recommended Speed Limit: 35 mph</b>	
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;"> <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> <div style="text-align: center;">  </div> </div>		

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Contra Loma Blvd					
<b>Limits:</b>	Contra Loma Blvd from SR4 to Longview Drive					
<b>Direction:</b>	NB/SB					
<b>Factors</b>						
<b>A. Prevailing Speed Data</b>						
Date /Location of Survey	3019 Contra Loma Boulevard (11/14/2014)					
Posted Speed Limit	35					
# Speed Data Collected	210					
85th Percentile	40					
10 mph Pace	33 - 42					
Percent in Pace	95%					
						
				<b>B. Traffic Factors</b>		
				Average Daily Traffic (ADT)	12,445	
				Length of Segment (mi.)	0.69	
Street Classification	Arterial					
<b>C. Collision History</b>						
Date Range Covered	Jan 09 - Dec 13					
Total Accidents	36					
Accident Rate (Acc/MVM)	2.29					
Statewide Average Accident Rate	1.83					
<b>D. Roadway Conditions</b>						
Adjacent Land Use	Location is residential and retail. One church between Putnam St and Longview Rd.					
Roadway Geometrics	Four lanes divided with median, Class II bike lanes on both sides between Longview Drive and Fitzuren Road. At SR4 four lanes merge into two before the bridge.					
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate.					
Speed Limit Change?	<b>No</b>					
<b>Existing Speed Limit: 35 mph</b>	<b>Recommended Speed Limit: 35 mph</b>					
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">   <b>Signed:</b> Chris D. Kinzel, PE         </div> <div style="text-align: center;">   <b>Title:</b> Vice President, TJKM Transportation Consultants         </div> </div>						

City of Antioch  
2014 Engineering and Traffic Survey

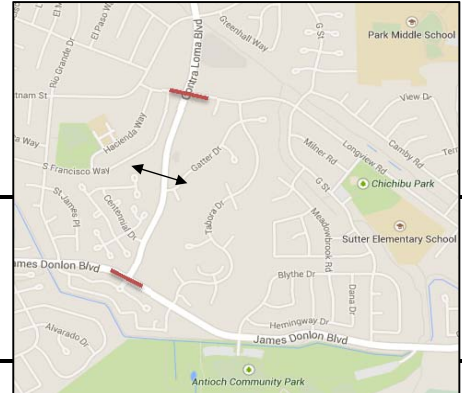
**Street:** Contra Loma Blvd  
**Limits:** Contra Loma Blvd from Longview Drive to James Donlon Blvd  
**Direction:** NB/SB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	3354 Contra Loma Boulevard (11/12/2014)
Posted Speed Limit	35
# Speed Data Collected	207
85th Percentile	38
10 mph Pace	31 - 42
Percent in Pace	99%



**B. Traffic Factors**

Average Daily Traffic (ADT)	8,616
Length of Segment (mi.)	0.52
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	11
Accident Rate (Acc/MVM)	1.35
Statewide Average Accident Rate	1.83

**D. Roadway Conditions**

Adjacent Land Use	Residential neighborhood with two churches located in the vicinity.
Roadway Geometrics	Four lanes divided with median, Class II bike lanes on both side.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit by downgrading the 85th percentile speed by 5mph due to residential density.

Speed Limit Change? **No**

**Existing Speed Limit: 35 mph**

**Recommended Speed Limit: 35 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:


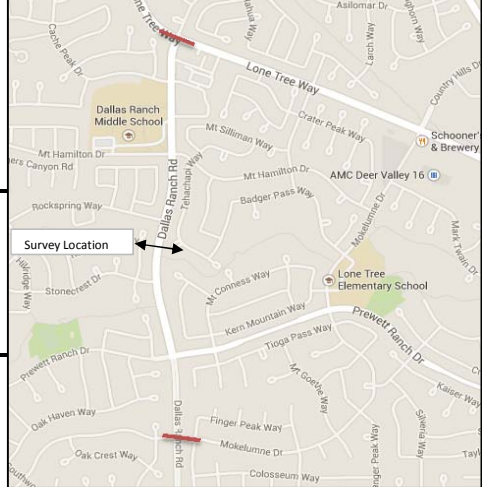
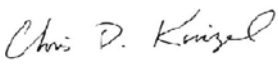

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE


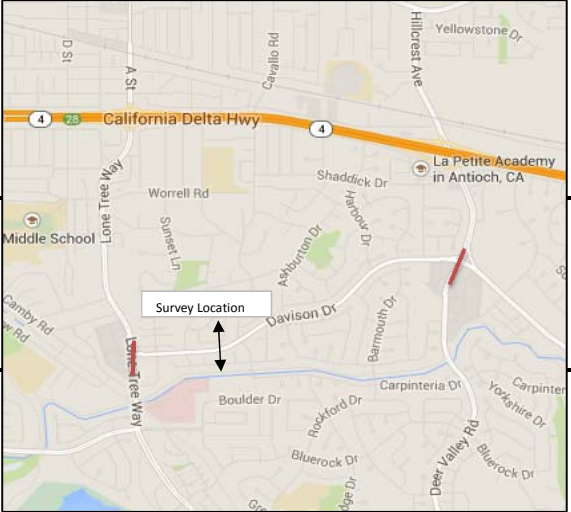
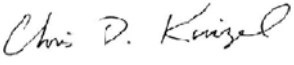



**Title:** Vice President, TJKM Transportation Consultants

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Dallas Ranch Road					
<b>Limits:</b>	Dallas Ranch Road from Lone Tree Way to Mokelumne Drive					
<b>Direction:</b>	NB/SB					
<b>Factors</b>						
<b>A. Prevailing Speed Data</b>						
Date /Location of Survey	Dallas Ranch Road 350 feet north of Stonecrest Drive (11/12/2014)					
Posted Speed Limit	45					
# Speed Data Collected	152					
85th Percentile	45					
10 mph Pace	37 - 46					
Percent in Pace	91%					
						
				<b>B. Traffic Factors</b>		
				Average Daily Traffic (ADT)	7,890	
Length of Segment (mi.)	1.03					
Street Classification	Arterial					
<b>C. Collision History</b>						
Date Range Covered	Jan 09 - Dec 13					
Total Accidents	22					
Accident Rate (Acc/MVM)	1.49					
Statewide Average Accident Rate	1.83					
<b>D. Roadway Conditions</b>						
Adjacent Land Use	Location is generally residential, with a middle school between Mt Hamilton Dr and Cache Peak Dr.					
Roadway Geometrics	Four lanes with median and Class II bike lanes in both directions. Yellow pedestrian crossings in both intersections: Cache Peak Dr & Dallas Ranch Rd, Mt Hamilton Dr & Dallas Ranch Rd.					
Comments	Results of attached engineering & traffic survey information support maintaining the existing 45 mph speed limit.					
Speed Limit Change?	<b>No</b>					
<b>Existing Speed Limit: 45 mph</b>	<b>Recommended Speed Limit: 45 mph</b>					
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;"> <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> <div style="text-align: center;">  </div> </div>						

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Davison Drive		
<b>Limits:</b>	Davison Drive from Lone Tree Way to Hillcrest Avenue		
<b>Direction:</b>	EB/WB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	505 Burwood Way (11/20/2014)		
Posted Speed Limit	35		
# Speed Data Collected	219		
85th Percentile	39		
10 mph Pace	32 - 41		
Percent in Pace	95%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	8,136		
Length of Segment (mi.)	1.27		
Street Classification	Arterial		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	39		
Accident Rate (Acc/MVM)	2.07		
Statewide Average Accident Rate	1.83		
			
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is generally residential, with a commercial square on the east side and west side of the roadway segment.		
Roadway Geometrics	Four lanes with median, A Class II bike lane in the eastbound direction and a on-street parking in the westbound direction until Mountaire St, then bike lanes in both direction. Horizontal curve in the roadway.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate.		
Speed Limit Change?	<b>No</b>		
Existing Speed Limit: 35 mph	<b>Recommended Speed Limit: 35 mph</b>		
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;">  <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> </div>			



City of Antioch  
2014 Engineering and Traffic Survey

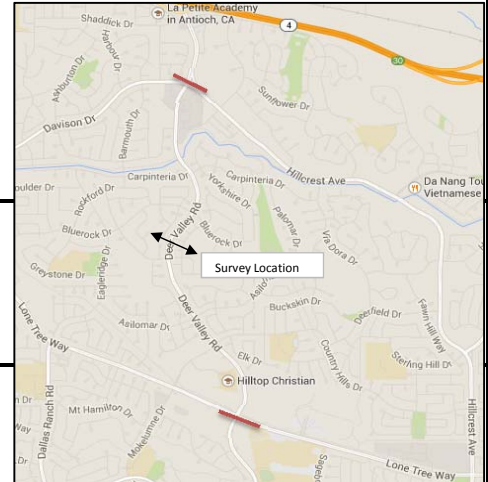
**Street:** Deer Valley Road  
**Limits:** Deer Valley Road from Hillcrest Avenue to Lone Tree Way  
**Direction:** NB/SB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	Deer Valley Road 900 feet south of Rocky Point Drive (11/25/2014)
Posted Speed Limit	45
# Speed Data Collected	207
85th Percentile	50
10 mph Pace	43 - 52
Percent in Pace	90%



**B. Traffic Factors**

Average Daily Traffic (ADT)	12,936
Length of Segment (mi.)	1.85
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	80
Accident Rate (Acc/MVM)	1.83
Statewide Average Accident Rate	1.83

**D. Roadway Conditions**

Adjacent Land Use	Location is generally residential area with a church and a school on the south side, and a commercial square on the north side.
Roadway Geometrics	Four lanes with median and left turn channel and Class II bike lanes in both direction. Yellow colored pedestrian crossing at the intersection of Lone Tree Way & Deer Valley Rd. Horizontal curve in roadway.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 45 mph speed limit by downgrading the 85th percentile speed by 5mph due to proximity of school and residential density.

Speed Limit Change? **No**

**Existing Speed Limit: 45 mph**

**Recommended Speed Limit: 45 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:


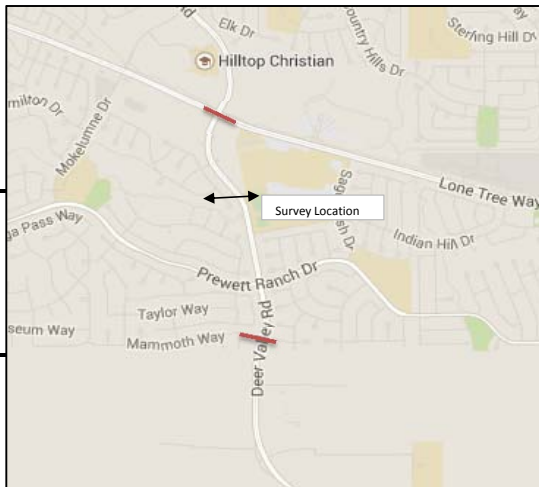
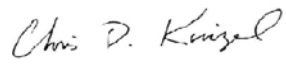

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE

**Title:** Vice President, TJKM Transportation Consultants



City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Deer Valley Road	
<b>Limits:</b>	Deer Valley Road from Lone Tree Way to Mammoth Way	
<b>Direction:</b>	NB/SB	
<b>Factors</b>		
<b>A. Prevailing Speed Data</b>		
Date /Location of Survey	Deer Valley Road 800 feet north of Prewitt Ranch Drive (11/25/2014)	
Posted Speed Limit	45	
# Speed Data Collected	207	
85th Percentile	48	
10 mph Pace	40 - 52	
Percent in Pace	98%	
<b>B. Traffic Factors</b>		
Average Daily Traffic (ADT)	15,120	
Length of Segment (mi.)	0.81	
Street Classification	Arterial	
<b>C. Collision History</b>		
Date Range Covered	Jan 09 - Dec 13	
Total Accidents	38	
Accident Rate (Acc/MVM)	1.69	
Statewide Average Accident Rate	1.83	
		
<b>D. Roadway Conditions</b>		
Adjacent Land Use	Location is generally residential area, with a high school and a few restaurants on the north side.	
Roadway Geometrics	Four lanes with median and Class II bike lanes in both direction. A yellow colored pedestrian cross walk on Deer Valley Rd close to the school.	
Comments	Results of attached engineering & traffic survey information support maintaining the existing 45 mph speed limit by downgrading the 85th percentile speed by 5mph due to residential density and proximity of school.	
Speed Limit Change?	<b>No</b>	
<b>Existing Speed Limit: 45 mph</b>	<b>Recommended Speed Limit: 45 mph</b>	
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;"> <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> <div style="text-align: center;">  </div> </div>		

City of Antioch  
2014 Engineering and Traffic Survey

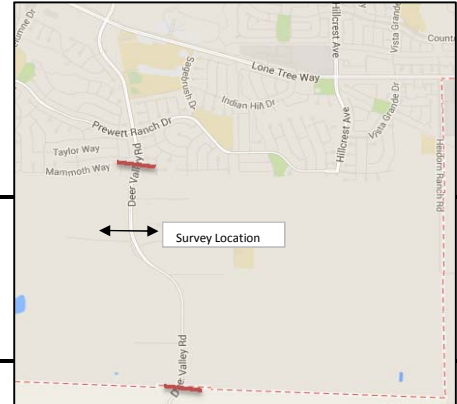
**Street:** Deer Valley Road  
**Limits:** Deer Valley Road from Mammoth Drive to City Limits  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	6801 Deer Valley Road (11/17/2014)
Posted Speed Limit	45
# Speed Data Collected	206
85th Percentile	50
10 mph Pace	42 - 51
Percent in Pace	85%



**B. Traffic Factors**

Average Daily Traffic (ADT)	7,442
Length of Segment (mi.)	1.23
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	11
Accident Rate (Acc/MVM)	0.66
Statewide Average Accident Rate	1.78

**D. Roadway Conditions**

Adjacent Land Use	Location is mostly vacant with a medical center and a high school on the northeast side.
Roadway Geometrics	Four lanes with median and Class II bike lanes in both direction. Slowly merge into two lanes undivided(double yellow center line) after Sand Creek Rd. white edgeline in both directions.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 45 mph speed limit due to the proximity of school.

Speed Limit Change? **No**

**Existing Speed Limit: 45 mph**

**Recommended Speed Limit: 45 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE

**Title:** Vice President, TJKM Transportation Consultants



City of Antioch  
2014 Engineering and Traffic Survey

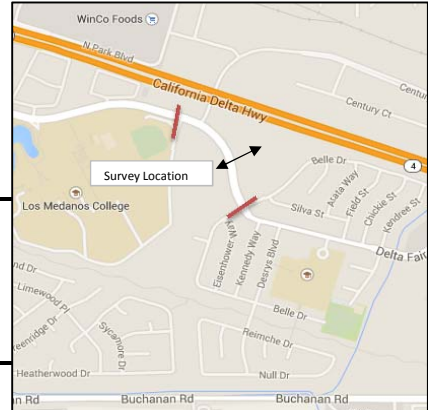
**Street:** Delta Fair Blvd  
**Limits:** Delta Fair Blvd from City Limits to Belle Drive  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	4545 Delta Fair Boulevard (11/21/2014)
Posted Speed Limit	35
# Speed Data Collected	164
85th Percentile	39
10 mph Pace	31 - 40
Percent in Pace	92%



**B. Traffic Factors**

Average Daily Traffic (ADT)	19,588
Length of Segment (mi.)	0.27
Street Classification	Collector

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	6
Accident Rate (Acc/MVM)	0.62
Statewide Average Accident Rate	1.83

**D. Roadway Conditions**

Adjacent Land Use	Location is mostly vacant, with a business park on the south side.
Roadway Geometrics	Four lanes with median, and a pedestrian cross walk at the entrance (exit) of the business park.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit by downgrading the 85th percentile speed by 5mph due to the 10 mph pace.

Speed Limit Change? **No**

**Existing Speed Limit: 35 mph**

**Recommended Speed Limit: 35 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE



**Title:** Vice President, TJKM Transportation Consultants

City of Antioch  
2014 Engineering and Traffic Survey

**Street:** Delta Fair Blvd  
**Limits:** Delta Fair Blvd from Belle Drive to Kendree Street  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

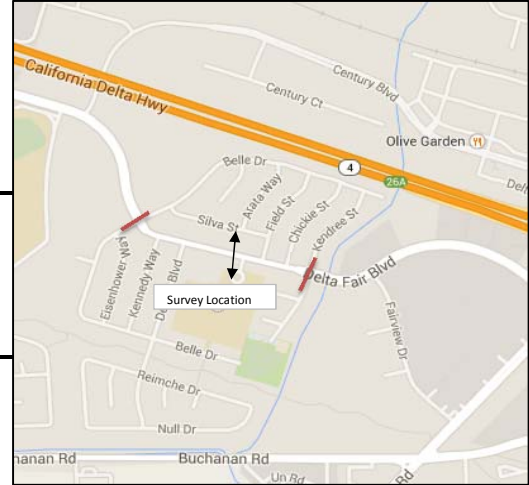
Date /Location of Survey	4325 Delta Fair Boulevard (11/21/2014)
Posted Speed Limit	30
# Speed Data Collected	181
85th Percentile	38
10 mph Pace	29 - 38
Percent in Pace	85%

**B. Traffic Factors**

Average Daily Traffic (ADT)	19,177
Length of Segment (mi.)	0.33
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	25
Accident Rate (Acc/MVM)	2.15
Statewide Average Accident Rate	2.47



**D. Roadway Conditions**

Adjacent Land Use	Location is generally residential area with a elementary school on the north side.
Roadway Geometrics	Four lanes undivided with shared on-street parking in both directions. Yellow pedestrian cross walk at the entrance (exit) of the school. Many driveways.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 30 mph speed limit by downgrading the 85th percentile speed due to proximity of school. (There is 25mph School Zone within the segment)

Speed Limit Change?

**Existing Speed Limit: 30 mph**

**Recommended Speed Limit: 30 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:


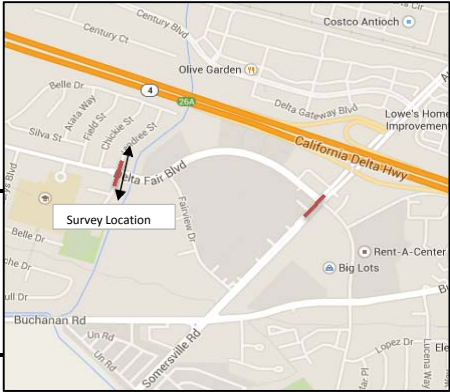
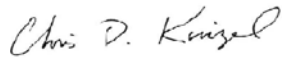

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE


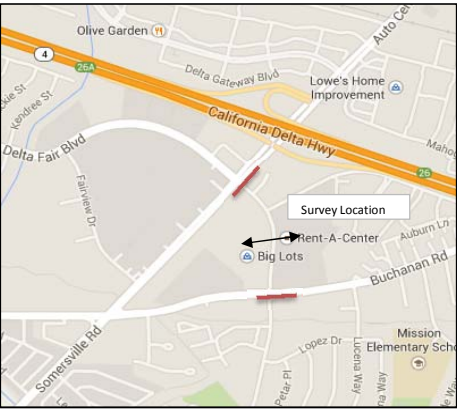
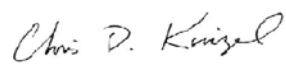



**Title:** Vice President, TJKM Transportation Consultants


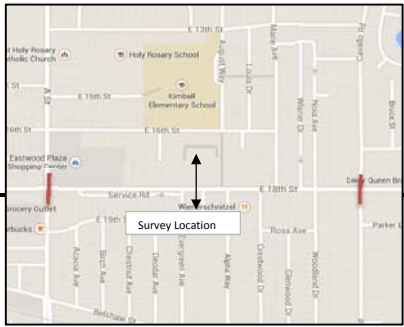
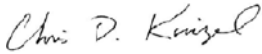

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Delta Fair Blvd					
<b>Limits:</b>	Delta Fair Blvd from Kindree Street to Somersville Road					
<b>Direction:</b>	EB/WB					
<b>Factors</b>						
<b>A. Prevailing Speed Data</b>						
Date /Location of Survey	3486 Delta Fair Boulevard (11/21/2014)					
Posted Speed Limit	30					
# Speed Data Collected	210					
85th Percentile	34					
10 mph Pace	27 - 36					
Percent in Pace	90%					
						
				<b>B. Traffic Factors</b>		
				Average Daily Traffic (ADT)	20,964	
				Length of Segment (mi.)	0.54	
Street Classification	Arterial					
<b>C. Collision History</b>						
Date Range Covered	Jan 09 - Dec 13					
Total Accidents	36					
Accident Rate (Acc/MVM)	1.75					
Statewide Average Accident Rate	1.83					
<b>D. Roadway Conditions</b>						
Adjacent Land Use	Location is generally commercial area, with a shopping center on the south side and a hospital on the north side. An apartment property on the southwest side.					
Roadway Geometrics	Four lanes with median. Slight horizontal curve between the mall entrance and Fairview Dr.					
Comments	Results of attached engineering & traffic survey information support maintaining the existing 30 mph speed limit by downgrading the 85th percentile speed by 5mph due to the 10 mph pace.					
Speed Limit Change?	<b>No</b>					
<b>Existing Speed Limit: 30 mph</b>	<b>Recommended Speed Limit: 30 mph</b>					
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">   <b>Signed:</b> Chris D. Kinzel, PE         </div> <div style="text-align: center;"> <b>Title:</b> Vice President, TJKM Transportation Consultants         </div> <div style="text-align: center;">  </div> </div>						

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Delta Fair Blvd						
<b>Limits:</b>	Delta Fair Blvd from Somersville Road to Buchanan Road						
<b>Direction:</b>	NB/SB						
<b>Factors</b>							
<b>A. Prevailing Speed Data</b>							
Date /Location of Survey	Delta Fair Boulevard 400 feet south of San Jose Drive (11/21/2014)						
Posted Speed Limit	30						
# Speed Data Collected	209						
85th Percentile	36						
10 mph Pace	28 - 37						
Percent in Pace	92%						
							
				<b>B. Traffic Factors</b>			
				Average Daily Traffic (ADT)	14,668		
				Length of Segment (mi.)	0.28		
Street Classification	Arterial						
<b>C. Collision History</b>							
Date Range Covered	Jan 09 - Dec 13						
Total Accidents	40						
Accident Rate (Acc/MVM)	5.40						
Statewide Average Accident Rate	2.47						
<b>D. Roadway Conditions</b>							
Adjacent Land Use	Mostly commercial land usage with many driveways in the roadway segment						
Roadway Geometrics	Four lanes undivided.						
Comments	Results of attached engineering & traffic survey information support maintaining the existing 30 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate.						
Speed Limit Change?	<b>No</b>						
<b>Existing Speed Limit: 30 mph</b>	<b>Recommended Speed Limit: 30 mph</b>						
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;"> <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> <div style="text-align: center;">  </div> </div>							

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	East 18th Street		
<b>Limits:</b>	East 18th Street from A Street to Cavallo Road		
<b>Direction:</b>	EB/WB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	34 East 18th Street (11/7/2014)		
Posted Speed Limit	30		
# Speed Data Collected	161		
85th Percentile	36		
10 mph Pace	29 - 38		
Percent in Pace	93%		
			
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	18,270		
Length of Segment (mi.)	0.50		
Street Classification	Arterial		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	39		
Accident Rate (Acc/MVM)	2.32		
Statewide Average Accident Rate	2.47		
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is generally commercial and residential with a shopping center and a church on the east and west side of the roadway segment		
Roadway Geometrics	Four lanes with a two-way left turn lane in between, undivided.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 30 mph speed limit by downgrading the 85th percentile speed by 5mph due to 10 mph pace.		
Speed Limit Change?	<b>No</b>		
Existing Speed Limit: 30 mph	Recommended Speed Limit: 30 mph		
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;"> <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> <div style="text-align: center;">  </div> </div>			



City of Antioch  
2014 Engineering and Traffic Survey

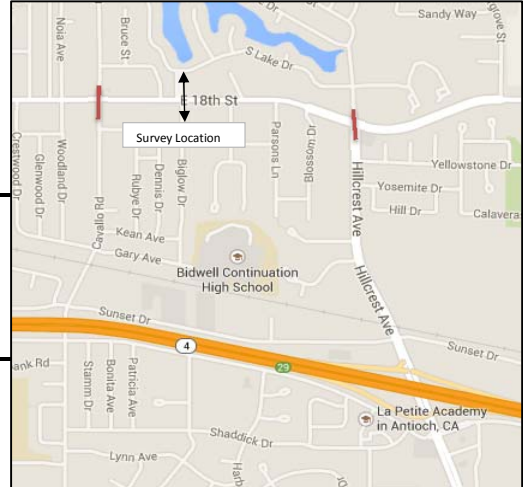
**Street:** East 18th Street  
**Limits:** East 18th Street from Cavallo Road to Hillcrest Avenue  
**Direction:** NB/SB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	1721 E. 18th Street (11/10/2014)
Posted Speed Limit	35
# Speed Data Collected	222
85th Percentile	41
10 mph Pace	33 - 42
Percent in Pace	86%



**B. Traffic Factors**

Average Daily Traffic (ADT)	15,376
Length of Segment (mi.)	0.51
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	26
Accident Rate (Acc/MVM)	1.82
Statewide Average Accident Rate	2.47

**D. Roadway Conditions**

Adjacent Land Use	Mixed residential and commercial land usage with small parcels of vacant lands.
Roadway Geometrics	Four lane undivided until Blossom Dr. Divided between Blossom Dr and Hillcrest Ave.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit by downgrading the 85th percentile speed by 5mph due to the 10 mph pace.

Speed Limit Change? **No**

**Existing Speed Limit: 35 mph**

**Recommended Speed Limit: 35 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE

**Title:** Vice President, TJKM Transportation Consultants



City of Antioch  
2014 Engineering and Traffic Survey

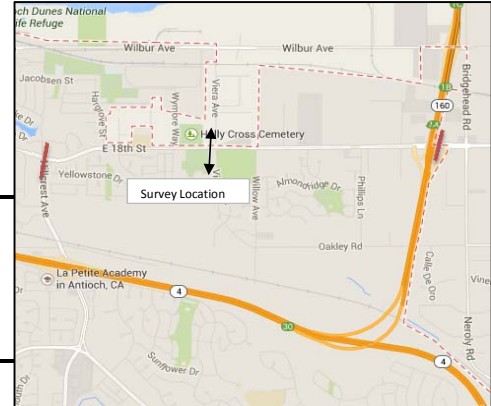
**Street:** East 18th Street  
**Limits:** East 18th Street from Hillcrest Avenue to City Limits  
**Direction:** NB/SB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	3022 E. 18th Street (11/4/2014)
Posted Speed Limit	45
# Speed Data Collected	230
85th Percentile	50
10 mph Pace	37 - 59
Percent in Pace	81%



**B. Traffic Factors**

Average Daily Traffic (ADT)	10,531
Length of Segment (mi.)	1.93
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	34
Accident Rate (Acc/MVM)	0.92
Statewide Average Accident Rate	1.83

**D. Roadway Conditions**

Adjacent Land Use	Location is generally residential area on the west side and open space on the east side. With a school, a cemetery and a park in between.
Roadway Geometrics	Four lanes with median from Hillcrest Ave to Hargrove St. Then from Hargrove St to Viera Ave, two through lanes in east bound direction, one through lane in west bound direction with a two-way left turn lane. Then four lanes with median until city limits.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 45 mph speed limit by downgrading the 85th percentile speed by 5mph due to proximity of school and residential density.

Speed Limit Change? **No**

**Existing Speed Limit: 45 mph**

**Recommended Speed Limit: 45 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:


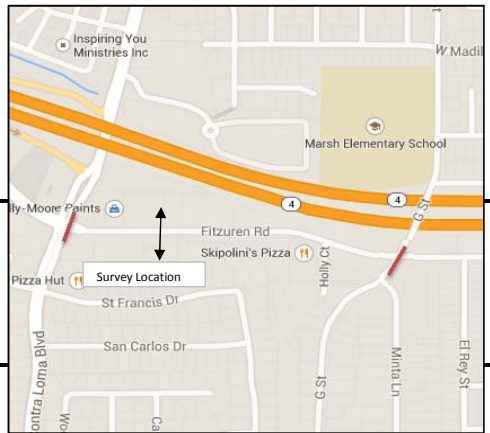
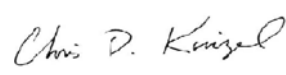

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE

**Title:** Vice President, TJKM Transportation Consultants



City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Fitzuren Road			
<b>Limits:</b>	Fitzuren Road from G Street to Contra Loma Blvd			
<b>Direction:</b>	EB/WB			
<b>Factors</b>				
<b>A. Prevailing Speed Data</b>				
Date /Location of Survey	995 Fitzuren Road (11/7/2014)			
Posted Speed Limit	30			
# Speed Data Collected	217			
85th Percentile	37			
10 mph Pace	28 - 37			
Percent in Pace	86%			
				
			<b>B. Traffic Factors</b>	
			Average Daily Traffic (ADT)	11,739
			Length of Segment (mi.)	0.35
Street Classification		Local		
<b>C. Collision History</b>				
Date Range Covered	Jan 09 - Dec 13			
Total Accidents	8			
Accident Rate (Acc/MVM)	1.06			
Statewide Average Accident Rate	1.78			
<b>D. Roadway Conditions</b>				
Adjacent Land Use	Mostly commercial neighborhood with a few units of apartments. A church is located in the vicinity.			
Roadway Geometrics	Two lanes undivided (double yellow center line), shared on-street parking available only in front of apartment units (on the east bound lane), many drive ways.			
Comments	Results of attached engineering & traffic survey information support maintaining the existing 30 mph speed limit by downgrading the 85th percentile speed by 5mph due to the 10 mph pace.			
Speed Limit Change?	<b>No</b>			
<b>Existing Speed Limit: 30 mph</b>	<b>Recommended Speed Limit: 30 mph</b>			
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;">  <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> </div>				

City of Antioch  
2014 Engineering and Traffic Survey

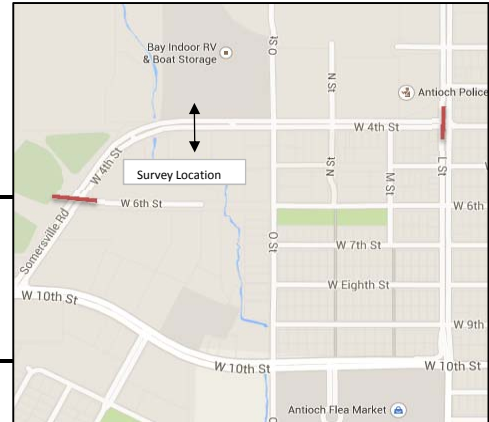
**Street:** West 4th Street  
**Limits:** West 4th Street from Somersville Road to L Street  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	1300 W. 4th Street (11/5/2014)
Posted Speed Limit	35
# Speed Data Collected	134
85th Percentile	38
10 mph Pace	30 - 39
Percent in Pace	89%



**B. Traffic Factors**

Average Daily Traffic (ADT)	5,150
Length of Segment (mi.)	0.46
Street Classification	Collector

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	5
Accident Rate (Acc/MVM)	1.15
Statewide Average Accident Rate	1.83

**D. Roadway Conditions**

Adjacent Land Use	Location is generally industrial and residential area. With a manufacturing factory and a storage warehouse on the westside curve. City Police Dept. close to the intersection of L St & 4th St. An apartment unit is also located nearby.
Roadway Geometrics	Divided 4 lane roadway with a horizontal curve between 6th St and O St.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit and downgrading the 85th percentile speed by 5mph due to residential density.

Speed Limit Change? **No**

**Existing Speed Limit: 35 mph**

**Recommended Speed Limit: 35 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:


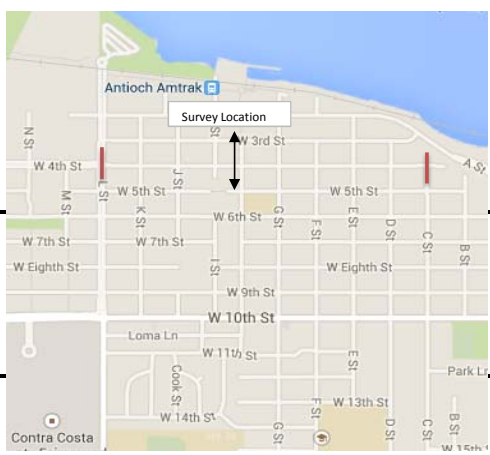
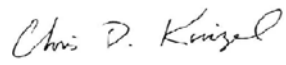

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE


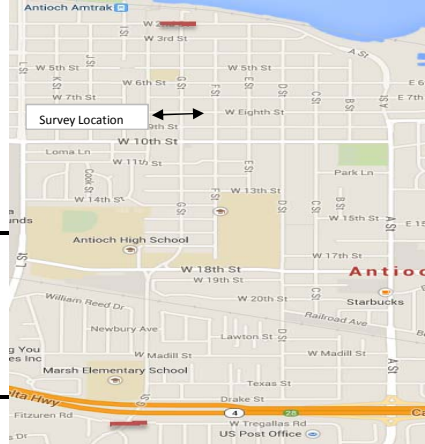
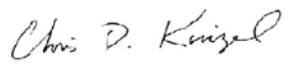

**Title:** Vice President, TJKM Transportation Consultants




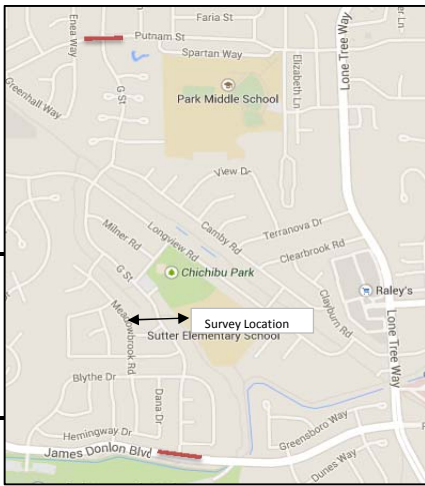
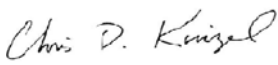

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	West 4th Street		
<b>Limits:</b>	West 4th Street from L Street to C Street		
<b>Direction:</b>	EB/WB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	608 W. 4th Street (11/5/2014)		
Posted Speed Limit	25		
# Speed Data Collected	118		
85th Percentile	26		
10 mph Pace	18 - 27		
Percent in Pace	92%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	1,289		
Length of Segment (mi.)	0.60		
Street Classification	Collector		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	4		
Accident Rate (Acc/MVM)	2.85		
Statewide Average Accident Rate	1.78		
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is generally residential area with a High school at H St.		
Roadway Geometrics	Two lane undivided with shared on-street parking in both directions. Pink colored pedestrian Crosswalks are found at the intersections: 4 St & J St, 4 St & I St, 4 St & H St, 4 St & G St, 4 St & F St.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit.		
Speed Limit Change?	<b>No</b>		
<b>Existing Speed Limit: 25 mph</b>	<b>Recommended Speed Limit: 25 mph</b>		
This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.			
Approved and Authorized for release by The City of Antioch Public Works:			
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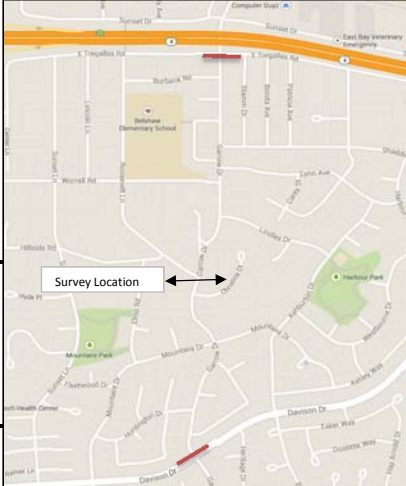
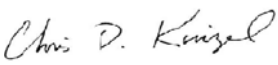

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	G Street		
<b>Limits:</b>	G Street from 2nd Street to W Tregallas Rd		
<b>Direction:</b>	NB/SB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	2317 G Street (11/10/2014)		
Posted Speed Limit	25		
# Speed Data Collected	147		
85th Percentile	31		
10 mph Pace	22 - 31		
Percent in Pace	86%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	5,750		
Length of Segment (mi.)	1.37		
Street Classification	Collector		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	41		
Accident Rate (Acc/MVM)	2.85		
Statewide Average Accident Rate	1.78		
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is generally residential area and downtown area. Downtown area locates between 2nd St and 5th St. School districts between: 5th St and 6th St, 17th St and 18th St, Madill St and Delta Hwy.		
Roadway Geometrics	Two lanes undivided with shared on-street parking in both directions (except a small portion alone G St). Pink colored pedestrian crossing at intersections: 2nd, 3rd, 4th, 5th St & G St. Yellow colored pedestrian crossing at intersections: 14th, 17th, 18th St & G St, Newbury Ave & G St, Madill St & G St, Drake St & G St, Tregallas Rd & G St.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate, proximity of school and high pedestrian activities.		
Speed Limit Change?	<b>No</b>		
<b>Existing Speed Limit: 25 mph</b>	<b>Recommended Speed Limit: 25 mph</b>		
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;">  <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> </div>			

City of Antioch  
2014 Engineering and Traffic Survey


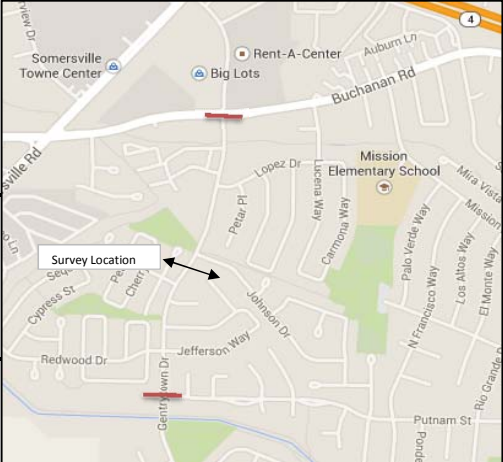
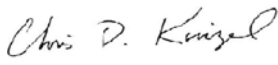

<b>Street:</b>	G Street		
<b>Limits:</b>	G Street from Putnam Street to James Donlon Blvd		
<b>Direction:</b>	NB/SB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	3240 G Street (11/14/2014)		
Posted Speed Limit	25		
# Speed Data Collected	137		
85th Percentile	33		
10 mph Pace	23 - 32		
Percent in Pace	84%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	2,223		
Length of Segment (mi.)	1.08		
Street Classification	Collector		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	16		
Accident Rate (Acc/MVM)	3.65		
Statewide Average Accident Rate	1.78		
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is generally residential area, with a park on the east side and a elementary school located in the surrounding.		
Roadway Geometrics	Two lanes undivided with shared on-street parking in both directions. Yellow colored pedestrian crossings at intersections: G St & Alger Rd, G St & Acorn Rd G St & Putnam St		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit due to proximity of school, residential density and the high accident rate.		
Speed Limit Change?	<b>No</b>		
<b>Existing Speed Limit: 25 mph</b>	<b>Recommended Speed Limit: 25 mph</b>		
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">   <b>Signed:</b> Chris D. Kinzel, PE         </div> <div style="text-align: center;"> <b>Title:</b> Vice President, TJKM Transportation Consultants         </div> <div style="text-align: center;">  </div> </div>			

City of Antioch  
2014 Engineering and Traffic Survey


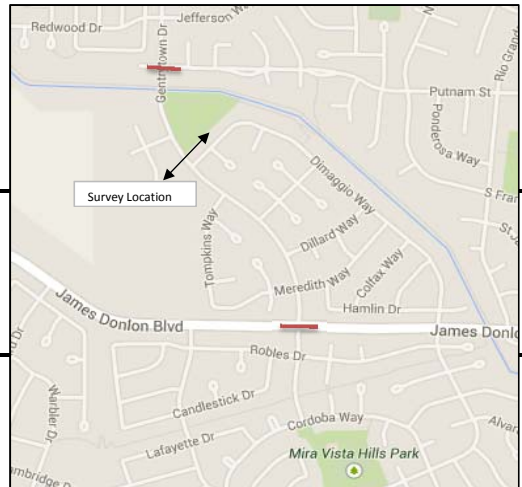
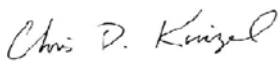

<b>Street:</b> Garrow Drive <b>Limits:</b> Garrow Drive from E Tregallas Road to Davison Drive <b>Direction:</b> NB/SB		
<b>Factors</b>		
<b>A. Prevailing Speed Data</b>		
Date /Location of Survey	3316 Garrow Drive (11/13/2014)	
Posted Speed Limit	25	
# Speed Data Collected	113	
85th Percentile	29	
10 mph Pace	21 - 30	
Percent in Pace	93%	
<b>B. Traffic Factors</b>		
Average Daily Traffic (ADT)	3,190	
Length of Segment (mi.)	0.85	
Street Classification	Collector	
<b>C. Collision History</b>		
Date Range Covered	Jan 09 - Dec 13	
Total Accidents	17	
Accident Rate (Acc/MVM)	3.44	
Statewide Average Accident Rate	1.78	
<b>D. Roadway Conditions</b>		
Adjacent Land Use	Location is generally residential area with a church and a elementary school located in the surrounding	
Roadway Geometrics	Two lanes undivided with shared on-street parking. Yellow-colored pedestrian crossing on intersections: Tregallas Rd & Garrow Dr, and three pedestrian crosswalks through Garrow Dr close to school entrance.	
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit by downgrading the 85th percentile speed by 5mph due to proximity of school, residential density and high accident rate.	
Speed Limit Change?		<b>No</b>
<b>Existing Speed Limit: 25 mph</b>	<b>Recommended Speed Limit: 25 mph</b>	
This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.		
Approved and Authorized for release by The City of Antioch Public Works:		
 <b>Signed:</b> Chris D. Kinzel, PE	<b>Title:</b> Vice President, TJKM Transportation Consultants	
		



City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Gentrytown Drive						
<b>Limits:</b>	Gentrytown Drive from Buchanan Road to Putnam Street						
<b>Direction:</b>	NB/SB						
<b>Factors</b>							
<b>A. Prevailing Speed Data</b>							
Date /Location of Survey	2823 Gentrytown Drive (11/21/2014)						
Posted Speed Limit	25						
# Speed Data Collected	189						
85th Percentile	35						
10 mph Pace	27 - 36						
Percent in Pace	89%						
							
				<b>B. Traffic Factors</b>			
				Average Daily Traffic (ADT)	12,242		
				Length of Segment (mi.)	0.59		
Street Classification				Collector			
<b>C. Collision History</b>							
Date Range Covered	Jan 09 - Dec 13						
Total Accidents	9						
Accident Rate (Acc/MVM)	0.68						
Statewide Average Accident Rate	1.78						
<b>D. Roadway Conditions</b>							
Adjacent Land Use	Location is generally residential with two shopping centers near Buchanan Rd and a park on westside.						
Roadway Geometrics	Two lanes undivided roadway. One yellow pedestrian walk at intersection of Gentrytown Dr & Lopez Dr.						
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit due to the residential density and associated pedestrian and bike activities.						
Speed Limit Change?		<b>No</b>					
<b>Existing Speed Limit: 25 mph</b>		<b>Recommended Speed Limit: 25 mph</b>					
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;">  <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> </div>							

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Gentrytown Drive						
<b>Limits:</b>	Gentrytown Drive from Putnam Street to James Donlon Blvd						
<b>Direction:</b>	NB/SB						
<b>Factors</b>							
<b>A. Prevailing Speed Data</b>							
Date /Location of Survey	3315 Gentrytown Drive (11/12/2014)						
Posted Speed Limit	25						
# Speed Data Collected	155						
85th Percentile	34						
10 mph Pace	25 - 34						
Percent in Pace	85%						
							
				<b>B. Traffic Factors</b>			
				Average Daily Traffic (ADT)	5,735		
				Length of Segment (mi.)	0.59		
Street Classification	Collector						
<b>C. Collision History</b>							
Date Range Covered	Jan 09 - Dec 13						
Total Accidents	6						
Accident Rate (Acc/MVM)	0.97						
Statewide Average Accident Rate	1.78						
<b>D. Roadway Conditions</b>							
Adjacent Land Use	Location is generally residential on south side with open space on northwest side and a park on northeast side.						
Roadway Geometrics	Two lanes undivided with shared on-street parking in both directions.						
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit due to the residential density and associated pedestrian and bike activities.						
Speed Limit Change?	<b>No</b>						
<b>Existing Speed Limit: 25 mph</b>	<b>Recommended Speed Limit: 25 mph</b>						
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">   <b>Signed:</b> Chris D. Kinzel, PE         </div> <div style="text-align: center;"> <b>Title:</b> Vice President, TJKM Transportation Consultants         </div> <div style="text-align: center;">  </div> </div>							

City of Antioch  
2014 Engineering and Traffic Survey

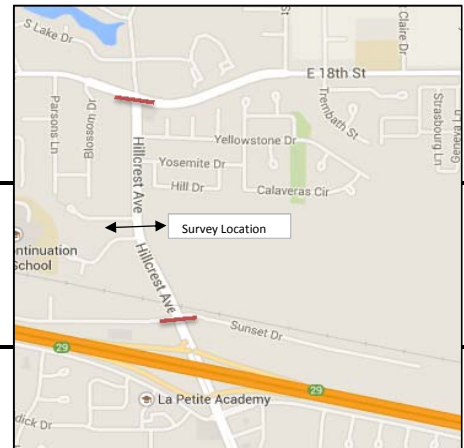
**Street:** Hillcrest Avenue  
**Limits:** Hillcrest Avenue from 18th Street to Sunset Drive  
**Direction:** NB/SB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	2024 Hillcrest Avenue (11/10/2014)
Posted Speed Limit	35
# Speed Data Collected	202
85th Percentile	43
10 mph Pace	35 - 44
Percent in Pace	84%



**B. Traffic Factors**

Average Daily Traffic (ADT)	15,397
Length of Segment (mi.)	0.46
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	13
Accident Rate (Acc/MVM)	1.01
Statewide Average Accident Rate	1.83

**D. Roadway Conditions**

Adjacent Land Use	Location is generally residential with a service center on the east side and vacant space close to Sunset Dr. RR tracks are found close to Sunset Dr and BART station located at southeast of sunset drive
Roadway Geometrics	Four lanes with median and Class II bike lanes in both direction.
Comments	The 85th percentile speed justifies to increase the speed from 35 mph to 40 mph. This includes a downgrade of the 85th percentile speed by 5mph due to the 10 mph pace.

Speed Limit Change?

**Existing Speed Limit: 35 mph**

**Recommended Speed Limit: mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:


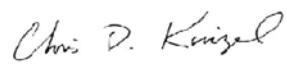

*Chris D. Kinzel*

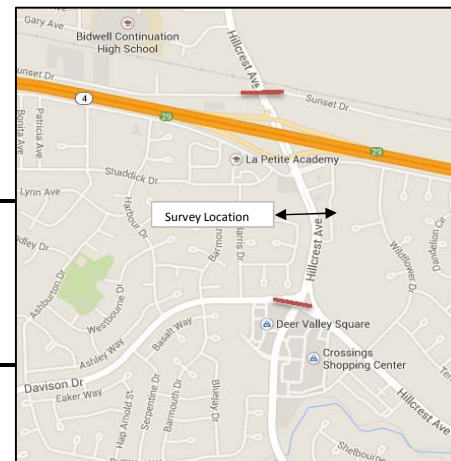
**Signed:** Chris D. Kinzel, PE




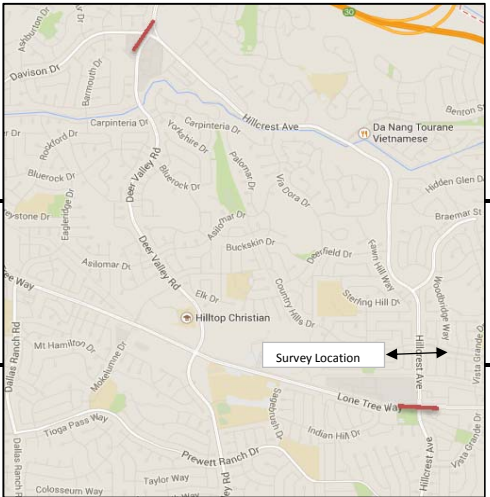
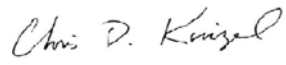

**Title:** Vice President, TJKM Transportation Consultants

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Hillcrest Avenue		
<b>Limits:</b>	Hillcrest Avenue from Sunset Drive to Davison Drive		
<b>Direction:</b>	NB/SB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	2751 Hillcrest Avenue (11/19/2014)		
Posted Speed Limit	45		
# Speed Data Collected	209		
85th Percentile	44		
10 mph Pace	36 - 45		
Percent in Pace	93%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	36,292		
Length of Segment (mi.)	0.55		
Street Classification	Arterial		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	20		
Accident Rate (Acc/MVM)	0.54		
Statewide Average Accident Rate	1.83		
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is generally commercial and residential area. A plaza on the east side and vacant space near California Delta Hwy.		
Roadway Geometrics	Six lanes with median and Class II bike lanes in both directions. A vertical curve above Delta Hwy.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 45 mph speed limit.		
Speed Limit Change?		<b>No</b>	
<b>Existing Speed Limit: 45 mph</b>		<b>Recommended Speed Limit: 45 mph</b>	
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">   <b>Signed:</b> Chris D. Kinzel, PE         </div> <div style="text-align: center;">   <b>Title:</b> Vice President, TJKM Transportation Consultants         </div> </div>			



City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Hillcrest Avenue		
<b>Limits:</b>	Hillcrest Avenue from Davison Drive to Lone Tree Way		
<b>Direction:</b>	EB/WB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	3527 Hillcrest Avenue (11/12/2014)		
Posted Speed Limit	45		
# Speed Data Collected	235		
85th Percentile	49		
10 mph Pace	42 - 51		
Percent in Pace	90%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	20,713		
Length of Segment (mi.)	1.85		
Street Classification	Arterial		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	93		
Accident Rate (Acc/MVM)	1.33		
Statewide Average Accident Rate	1.83		
			
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is mixed with residential, commercial and business. A shopping center adjacent to the intersection: Deer Valley Rd & Hillcrest Ave. Business park adjacent to Wildflower Dr. A plaza close to Lone Tree Way. There are about 1.7 miles of vacant space along the Hillcrest Ave.		
Roadway Geometrics	Four lanes divided with median, with Class II bike lanes in both directions. Horizontal curve south of Wild Horse Road.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 45 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate.		
Speed Limit Change?	<b>No</b>		
<b>Existing Speed Limit: 45 mph</b>	<b>Recommended Speed Limit: 45 mph</b>		
This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.			
Approved and Authorized for release by The City of Antioch Public Works:			
 <b>Signed:</b> Chris D. Kinzel, PE		 <b>Title:</b> Vice President, TJKM Transportation Consultants	

City of Antioch  
2014 Engineering and Traffic Survey

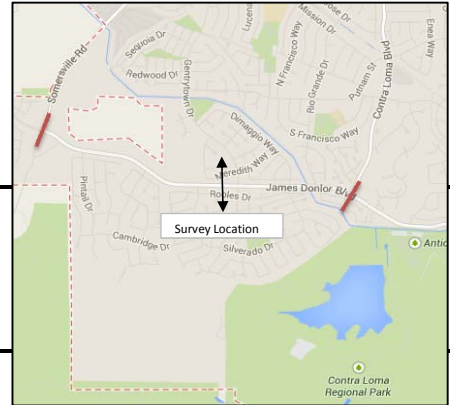
**Street:** James Donlon Blvd  
**Limits:** James Donlon Blvd from Somersville Road to Contra Loma Blvd  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	James Donlon Boulevard mid block between Silverado Drive and Gentrytown Drive (11/12/2014)
Posted Speed Limit	40
# Speed Data Collected	207
85th Percentile	44
10 mph Pace	37 - 46
Percent in Pace	93%



**B. Traffic Factors**

Average Daily Traffic (ADT)	17,074
Length of Segment (mi.)	1.56
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	52
Accident Rate (Acc/MVM)	1.07
Statewide Average Accident Rate	1.83

**D. Roadway Conditions**

Adjacent Land Use Location is generally residential and open space, with half vacant space on the north side.

Roadway Geometrics Four lanes divided with median, with Class II bike lanes in both directions.

Comments Results of attached engineering & traffic survey information support maintaining the existing 40 mph speed limit by downgrading the 85th percentile speed by 5mph due to residential density

Speed Limit Change? **No**

**Existing Speed Limit: 40 mph**

**Recommended Speed Limit: 40 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:


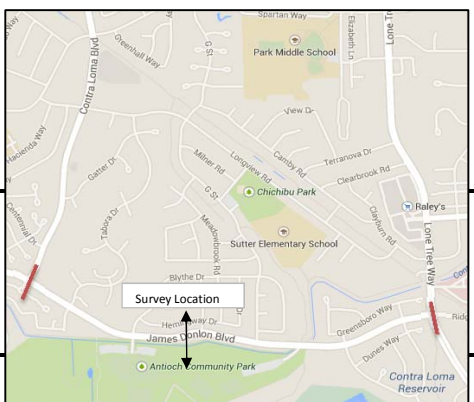
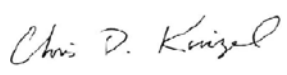

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE


**Title:** Vice President, TJKM Transportation Consultants

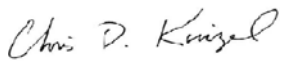



City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	James Donlon Blvd		
<b>Limits:</b>	James Donlon Blvd from Contra Loma Blvd to Lone Tree Way		
<b>Direction:</b>	EB/WB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	James Donlon Blvd mid block between G St and S. Royal Links Circle (11/12/2014)		
Posted Speed Limit	40		
# Speed Data Collected	213		
85th Percentile	45		
10 mph Pace	38 - 47		
Percent in Pace	92%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	23,162		
Length of Segment (mi.)	1.56		
Street Classification	Arterial		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	54		
Accident Rate (Acc/MVM)	0.82		
Statewide Average Accident Rate	1.83		
			
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is generally residential, with a community park and open space on the south side.		
Roadway Geometrics	Four lanes divided with median, with Class II bike lanes in both directions.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 40 mph speed limit by downgrading the 85th percentile speed by 5mph due to 10 mph pace.		
Speed Limit Change?	<b>No</b>		
<b>Existing Speed Limit: 40 mph</b>	<b>Recommended Speed Limit: 40 mph</b>		
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;">  <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> </div>			

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	L Street	
<b>Limits:</b>	L Street from 2nd Street to 10th Street	
<b>Direction:</b>	NB/SB	

Factors	
<b>A. Prevailing Speed Data</b>	
Date /Location of Survey	755 L Street (11/6/2014)
Posted Speed Limit	25
# Speed Data Collected	116
85th Percentile	38
10 mph Pace	29 - 38
Percent in Pace	85%
<b>B. Traffic Factors</b>	
Average Daily Traffic (ADT)	3,404
Length of Segment (mi.)	0.39
Street Classification	Arterial
<b>C. Collision History</b>	
Date Range Covered	Jan 09 - Dec 13
Total Accidents	17
Accident Rate (Acc/MVM)	6.99
Statewide Average Accident Rate	1.83
<b>D. Roadway Conditions</b>	
Adjacent Land Use	Location is generally residential area, with the city police department between 2nd and 4th Sts.
Roadway Geometrics	Divided roadway. North bound: between 2nd and 4th St, one lane with shared parking, and then between 4th and 10th, two lanes with on-street parking lane. South bound: between 2nd and 4th St two lanes, and then between 4th and 10th two lanes with Class II bike lane.
Comments	Results of attached engineering & traffic survey information support increasing the existing 25 mph speed limit to 30mph by downgrading the 85th percentile speed by 5mph due to the very high accident rate.
Speed Limit Change? <b>Yes</b>	
<b>Existing Speed Limit: 25 mph</b>	<b>Recommended Speed Limit: 30 mph</b>
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;"> <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> <div style="text-align: center;">  </div> </div>	



City of Antioch  
2014 Engineering and Traffic Survey

**Street:** L Street  
**Limits:** L Street from 10th Street to 18th Street  
**Direction:** NB/SB



**Factors**

**A. Prevailing Speed Data**

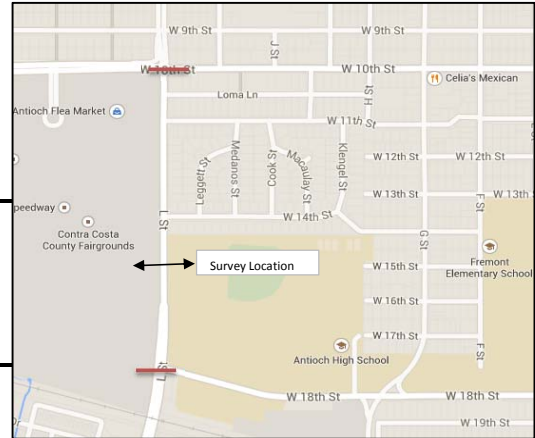
Date /Location of Survey	1121 L Street (11/7/2014)
Posted Speed Limit	35
# Speed Data Collected	208
85th Percentile	38
10 mph Pace	30 - 39
Percent in Pace	91%

**B. Traffic Factors**

Average Daily Traffic (ADT)	6,963
Length of Segment (mi.)	0.39
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	16
Accident Rate (Acc/MVM)	3.21
Statewide Average Accident Rate	1.78



**D. Roadway Conditions**

Adjacent Land Use	Location is generally commercial (flea market and county fairgrounds), residential with a high school.
Roadway Geometrics	Two lanes undivided with on-street parking lanes in both directions. Yellow pedestrian cross walk at intersection: L St & 14th St, L St & 18th St
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate and proximity of school.

Speed Limit Change? **No**

**Existing Speed Limit: 35 mph**

**Recommended Speed Limit: 35 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:


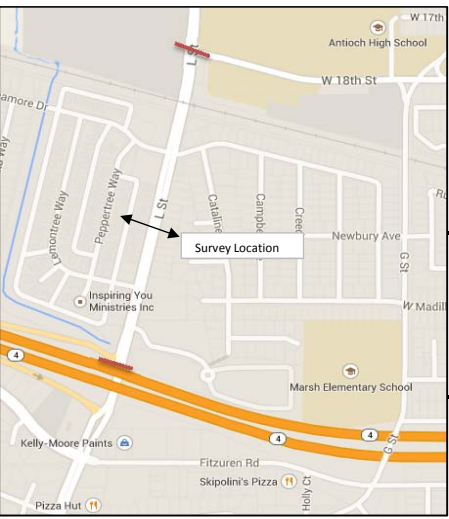
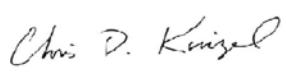

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE

**Title:** Vice President, TJKM Transportation Consultants



City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	L Street		
<b>Limits:</b>	L Street from 18th Street to SR4		
<b>Direction:</b>	NB/SB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	2212 L Street (11/20/2014)		
Posted Speed Limit	35		
# Speed Data Collected	208		
85th Percentile	37		
10 mph Pace	31 - 40		
Percent in Pace	94%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	11,964		
Length of Segment (mi.)	0.44		
Street Classification	Arterial		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	25		
Accident Rate (Acc/MVM)	2.58		
Statewide Average Accident Rate	1.83		
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is generally residential area with a park, a school and a small plaza at the north side.		
Roadway Geometrics	Four lanes with median. A RR tracks cross L St between 18th St and William Reed Dr. Yellow pedestrian cross walk can be observed at the intersections: Lemontree Way & L St, William Reed Dr & L St, 18th St & L St.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate, proximity of school and pedestrian and bike activities.		
Speed Limit Change?	<b>No</b>		
<b>Existing Speed Limit: 35 mph</b>	<b>Recommended Speed Limit: 35 mph</b>		
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;">  <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> </div>			

City of Antioch  
2014 Engineering and Traffic Survey

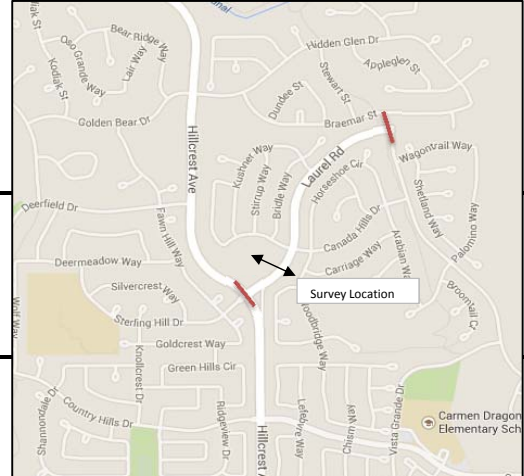
**Street:** Laurel Road  
**Limits:** Laurel Road from Hillcrest Avenue to End  
**Direction:** NB/SB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	Laurel Road 500 feet south of Kushner Way (11/20/2014)
Posted Speed Limit	45
# Speed Data Collected	209
85th Percentile	48
10 mph Pace	41 - 50
Percent in Pace	94%



**B. Traffic Factors**

Average Daily Traffic (ADT)	4,596
Length of Segment (mi.)	0.55
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	8
Accident Rate (Acc/MVM)	1.74
Statewide Average Accident Rate	1.83

**D. Roadway Conditions**

Adjacent Land Use	Location is generally residential area with an open space at the northeast corner of the intersection of Hillcrest Ave & Laurel Road.
Roadway Geometrics	Four lanes divided with median, with Class II bike lanes in both directions.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 45 mph speed limit by downgrading the 85th percentile speed by 5mph due to residential density.

Speed Limit Change? **No**

**Existing Speed Limit: 45 mph**

**Recommended Speed Limit: 45 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE



**Title:** Vice President, TJKM Transportation Consultants

City of Antioch  
2014 Engineering and Traffic Survey

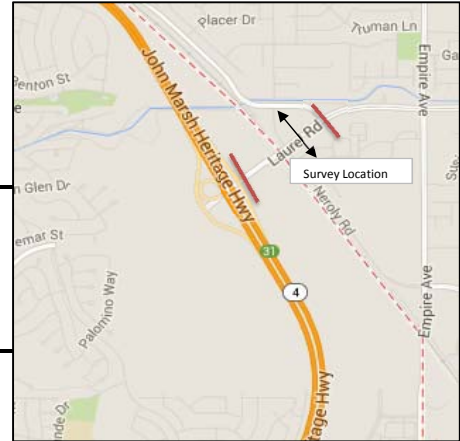
**Street:** Laurel Road  
**Limits:** Laurel Road from SR4 to City Limits  
**Direction:** NB/SB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	Laurel Road 600 feet west of Oak Avenue (11/20/2014)
Posted Speed Limit	45
# Speed Data Collected	228
85th Percentile	49
10 mph Pace	42 - 51
Percent in Pace	92%



**B. Traffic Factors**

Average Daily Traffic (ADT)	28,864
Length of Segment (mi.)	0.33
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	4
Accident Rate (Acc/MVM)	0.23
Statewide Average Accident Rate	1.83

**D. Roadway Conditions**

Adjacent Land Use Location is open space.

Roadway Geometrics Six Lanes with median, and Class II bike lanes in both directions.

Comments Results of attached engineering & traffic survey information support maintaining the existing 45 mph speed limit by downgrading the 85th percentile speed by 5mph due to the 10 mph pace.

Speed Limit Change? **No**

**Existing Speed Limit: 45 mph**

**Recommended Speed Limit: 45 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:


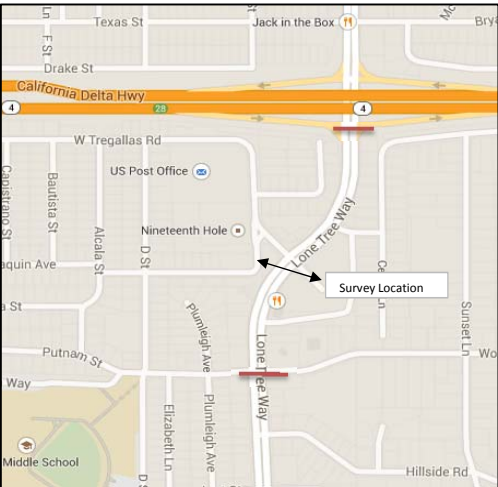
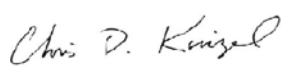

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE


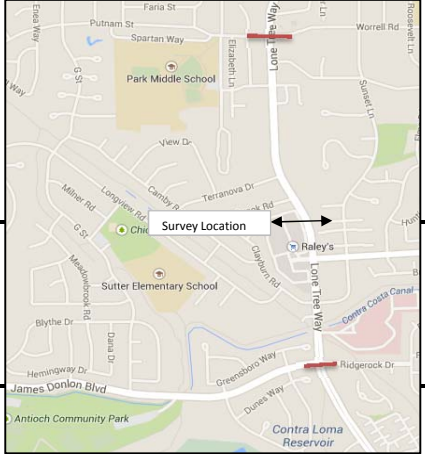
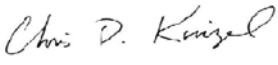

**Title:** Vice President, TJKM Transportation Consultants




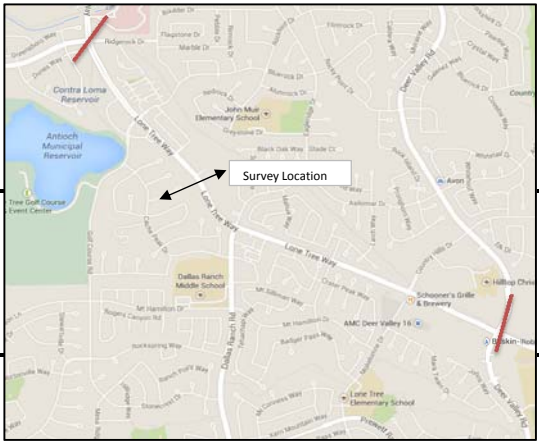
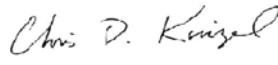

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Lone Tree Way		
<b>Limits:</b>	Lone Tree Way from SR4 to Putnam Street		
<b>Direction:</b>	NB/SB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	2866 Lone Tree Way (11/13/2014)		
Posted Speed Limit	30		
# Speed Data Collected	222		
85th Percentile	40		
10 mph Pace	33 - 42		
Percent in Pace	95%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	28,921		
Length of Segment (mi.)	0.33		
Street Classification	Arterial		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	49		
Accident Rate (Acc/MVM)	2.81		
Statewide Average Accident Rate	1.83		
			
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is mixed with commercial (shopping center), service (gas station, real estate, chiropractic center) and residential.		
Roadway Geometrics	Four lanes with median, and Class II bike lanes in both directions.		
Comments	The 85th percentile speed justifies to increase the speed from 30 mph to 35 mph. This includes a downgrade of the 85th percentile speed by 5mph due to the high accident rate.		
Speed Limit Change?	<b>Yes</b>		
Existing Speed Limit: 30 mph	<b>Recommended Speed Limit: 35 mph</b>		
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;">  <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> </div>			



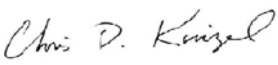

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Lone Tree Way		
<b>Limits:</b>	Lone Tree Way from Putnam Street to James Donlon Blvd		
<b>Direction:</b>	NB/SB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	3120 Lone Tree Way (11/13/2014)		
Posted Speed Limit	35		
# Speed Data Collected	202		
85th Percentile	42*		
10 mph Pace	35 - 44		
Percent in Pace	86%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	28,001		
Length of Segment (mi.)	0.91		
Street Classification	Arterial		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	84		
Accident Rate (Acc/MVM)	1.82		
Statewide Average Accident Rate	1.83		
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Mixed residential and commercial land usage. A medical center and churches along the roadway segment		
Roadway Geometrics	Between Putnam St and Walton Ln: four lanes with median and shared on-street parking in both directions. Between Walton Ln and Sunset Ln: four lanes with median, and Class II bike lanes in both directions. Between Sunset Ln and James Donlon Blvd, southbound has three lanes, northbound has two lanes and a Class II bike lane. Yellow colored pedestrian crossing at intersection of Putnam St & Lone Tree Way.		
* 85th Percentile speed corrected to 42 mph on 12-2-15 by Chris D. Kinzel	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit due to the high accident rate.		
Speed Limit Change?	<b>No</b>		
<b>Existing Speed Limit: 35 mph</b>	<b>Recommended Speed Limit: 35 mph</b>		
This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.			
Approved and Authorized for release by The City of Antioch Public Works:			
 <b>Signed:</b> Chris D. Kinzel, PE		 <b>Title:</b> Vice President, TJKM Transportation Consultants	

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Lone Tree Way					
<b>Limits:</b>	Lone Tree Way from James Donlon Blvd to Deer Valley Road					
<b>Direction:</b>	EB/WB					
<b>Factors</b>						
<b>A. Prevailing Speed Data</b>						
Date /Location of Survey	4055 Lone Tree Way (11/13/2014)					
Posted Speed Limit	45					
# Speed Data Collected	219					
85th Percentile	45					
10 mph Pace	36 - 45					
Percent in Pace	81%					
						
				<b>B. Traffic Factors</b>		
				Average Daily Traffic (ADT)	26,896	
				Length of Segment (mi.)	1.80	
Street Classification	Arterial					
<b>C. Collision History</b>						
Date Range Covered	Jan 09 - Dec 13					
Total Accidents	85					
Accident Rate (Acc/MVM)	0.96					
Statewide Average Accident Rate	1.83					
<b>D. Roadway Conditions</b>						
Adjacent Land Use	Location is generally residential. A hospital at the northeast corner of Ridgerock Dr & Lone Tree Way. A Medical Career College at the northeast corner of Bluerock Dr and Lone Tree Way. A church between Country Hills Dr and Deer Valley Rd. A plaza at the southwest corner of intersection Lone Tree Way & Deer Valley Rd.					
Roadway Geometrics	With Median. Between James Donlon Blvd and Bluerock Dr, three lanes in southbound, two lanes in northbound with edgeline. 800 ft after Bluerock intersection, southbound three lanes merge into two lanes, northbound remains two lanes, emergency stop area in both directions.					
Comments	Results of attached engineering & traffic survey information support maintaining the existing 45 mph speed limit.					
Speed Limit Change?	<b>No</b>					
Existing Speed Limit: 45 mph	<b>Recommended Speed Limit: 45 mph</b>					
This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.						
Approved and Authorized for release by The City of Antioch Public Works:						
 <b>Signed:</b> Chris D. Kinzel, PE		<b>Title:</b> Vice President, TJKM Transportation Consultants				
						

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Lone Tree Way		
<b>Limits:</b>	Lone Tree Way from Deer Valley Road to City Limits		
<b>Direction:</b>	EB/WB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	4672 Lone Tree Way (11/25/2014)		
Posted Speed Limit	45		
# Speed Data Collected	207		
85th Percentile	49		
10 mph Pace	43 - 52		
Percent in Pace	94%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	25,965		
Length of Segment (mi.)	2.56		
Street Classification		Arterial	
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	106		
Accident Rate (Acc/MVM)	0.87		
Statewide Average Accident Rate	1.83		
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is mainly commercial and residential area. A school on the south side between Deer Valley Rd and Sagebrush Dr. A library, a water park, a skate park and a plaza between Deer Valley Rd and Hillcrest Ave. A park on the southwest corner of Lone Tree Way & Hillcrest Ave. There is a shopping center adjacent to SR4.		
Roadway Geometrics	Between Deer Valley Rd and Hillcrest Ave, four lanes with median and edgeline in both directions. After Hillcrest Ave, six lanes with median. Yellow colored pedestrian crossings are observed at intersections: Deer Valley Rd & Lone Tree Way, school entrance, Sagebrush Dr & Lone Tree Way.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 45 mph speed limit by downgrading the 85th percentile speed by 5mph due to proximity of school, library, residential density and associated pedestrian and bike activities.		
Speed Limit Change?	<b>No</b>		
<b>Existing Speed Limit: 45 mph</b>	<b>Recommended Speed Limit: 45 mph</b>		
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;">  <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> </div>			



City of Antioch  
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**Street:** Minaker/13th/Hillcrest

**Limits:** Minaker/13th/Hillcrest from Wilbur Avenue to 18th Street

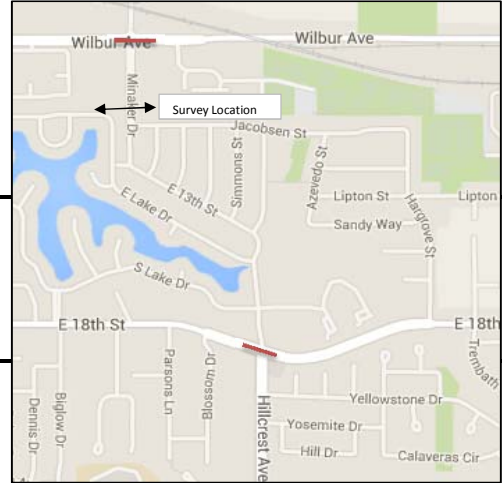
**Direction:** NB/SB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	1017 Minaker Drive (11/4/2014)
Posted Speed Limit	25
# Speed Data Collected	143
85th Percentile	32
10 mph Pace	24 - 33
Percent in Pace	89%



**B. Traffic Factors**

Average Daily Traffic (ADT)	3,018
Length of Segment (mi.)	0.68
Street Classification	Collector

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	11
Accident Rate (Acc/MVM)	2.92
Statewide Average Accident Rate	1.78

**D. Roadway Conditions**

Adjacent Land Use	Location is generally residential area.
Roadway Geometrics	Two lanes undivided with shared on-street parking in both directions. A Class II bike lane in southbound between E Lake Dr and S Lake Dr.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit by downgrading the 85th percentile speed by 5mph due to high accident rate, residential density and associated pedestrian and bike activities.

Speed Limit Change? **No**

**Existing Speed Limit: 25 mph**

**Recommended Speed Limit: 25 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:



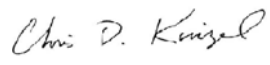

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE


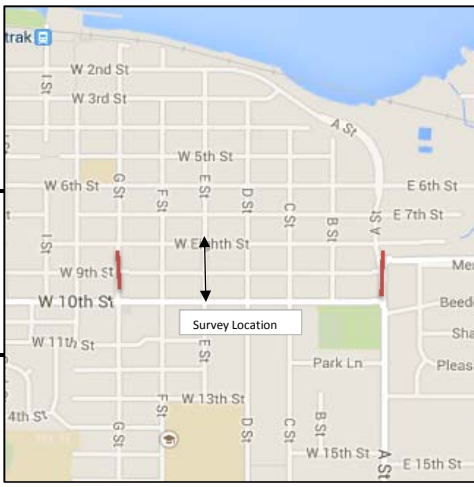
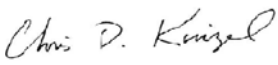

**Title:** Vice President, TJKM Transportation Consultants




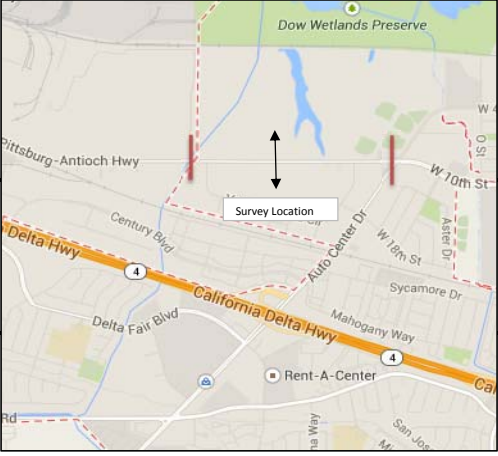


City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	W Ninth St		
<b>Limits:</b>	W Ninth St from O Street to G Street		
<b>Direction:</b>	EB/WB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	912 West 9th Street (11/6/2014)		
Posted Speed Limit	25		
# Speed Data Collected	114		
85th Percentile	32		
10 mph Pace	23 - 32		
Percent in Pace	82%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	3,163		
Length of Segment (mi.)	0.53		
Street Classification	Collector		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	8		
Accident Rate (Acc/MVM)	2.63		
Statewide Average Accident Rate	1.78		
			
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is generally residential with a few restaurants.		
Roadway Geometrics	Two lanes undivided with shared on-street parking in both directions.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate.		
Speed Limit Change?	<b>No</b>		
Existing Speed Limit: 25 mph	<b>Recommended Speed Limit: 25 mph</b>		
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;">  <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> </div>			


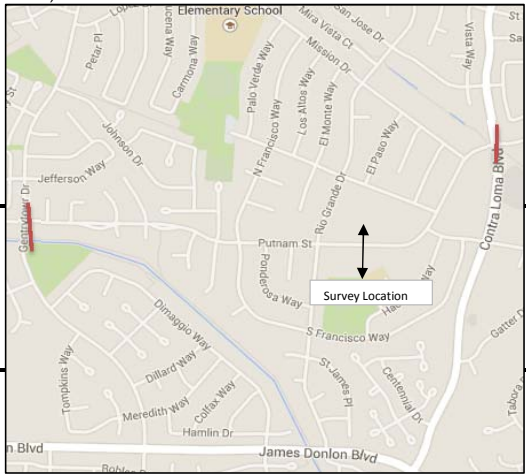
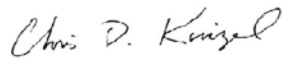

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	W Ninth St						
<b>Limits:</b>	W Ninth St from G Street to A Street						
<b>Direction:</b>	EB/WB						
<b>Factors</b>							
<b>A. Prevailing Speed Data</b>							
Date /Location of Survey	312 West 9th Street (11/6/2014)						
Posted Speed Limit	25						
# Speed Data Collected	104						
85th Percentile	28						
10 mph Pace	20 - 29						
Percent in Pace	88%						
							
				<b>B. Traffic Factors</b>			
				Average Daily Traffic (ADT)	2,263		
Length of Segment (mi.)	0.42						
Street Classification	Collector						
<b>C. Collision History</b>							
Date Range Covered	Jan 09 - Dec 13						
Total Accidents	4						
Accident Rate (Acc/MVM)	2.31						
Statewide Average Accident Rate	1.78						
<b>D. Roadway Conditions</b>							
Adjacent Land Use	Location is generally residential.						
Roadway Geometrics	Two lanes undivided with shared on-street parking in both directions.						
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate.						
Speed Limit Change?	<b>No</b>						
<b>Existing Speed Limit: 25 mph</b>	<b>Recommended Speed Limit: 25 mph</b>						
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">   <b>Signed:</b> Chris D. Kinzel, PE         </div> <div style="text-align: center;">   <b>Title:</b> Vice President, TJKM Transportation Consultants         </div> </div>							


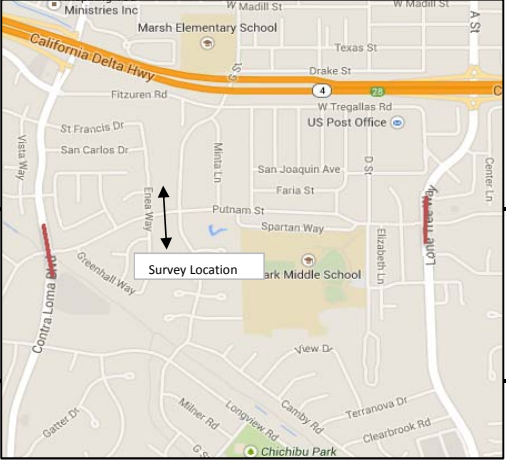
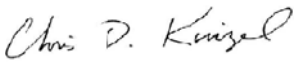

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Pittsburg-Antioch	
<b>Limits:</b>	Pittsburg-Antioch from City Limits to Auto Center Drive	
<b>Direction:</b>	EB/WB	
<b>Factors</b>		
<b>A. Prevailing Speed Data</b>		
Date /Location of Survey	2484 West 10th Street (11/7/2014)	
Posted Speed Limit	50	
# Speed Data Collected	228	
85th Percentile	51	
10 mph Pace	42 - 51	
Percent in Pace	78%	
<b>B. Traffic Factors</b>		
Average Daily Traffic (ADT)	16,095	
Length of Segment (mi.)	0.74	
Street Classification	Arterial	
<b>C. Collision History</b>		
Date Range Covered	Jan 09 - Dec 13	
Total Accidents	22	
Accident Rate (Acc/MVM)	1.01	
Statewide Average Accident Rate	1.78	
		
<b>D. Roadway Conditions</b>		
Adjacent Land Use	Location is almost vacant on the north side. A few apartment properties and car rental store/car maintenance/car dealership on the south side.	
Roadway Geometrics	Three lanes undivided, the middle one is two-way left turn lane. Both directions have edgeline.	
Comments	Results of attached engineering & traffic survey information support maintaining the existing 50 mph speed limit.	
Speed Limit Change?	<b>No</b>	
<b>Existing Speed Limit: 50 mph</b>	<b>Recommended Speed Limit: 50 mph</b>	
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;"> <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> <div style="text-align: center;">  </div> </div>		

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Putnam Street		
<b>Limits:</b>	Putnam Street from Gentrytown Drive to Contra Loma Blvd		
<b>Direction:</b>	EB/WB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	1219 Putnam Street (11/14/2014)		
Posted Speed Limit	25		
# Speed Data Collected	115		
85th Percentile	35		
10 mph Pace	27 - 36		
Percent in Pace	81%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	2,981		
Length of Segment (mi.)	1.09		
Street Classification	Collector		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	15		
Accident Rate (Acc/MVM)	2.53		
Statewide Average Accident Rate	1.78		
			
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is generally residential, with a church between Rio Grande Dr and Monterey Dr, and a commercial square between Longview Rd and Contra Loma Blvd.		
Roadway Geometrics	Two lanes undivided with shared on-street parking in both directions.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit due to the residential density and associated pedestrian and bike activities.		
Speed Limit Change?	<b>No</b>		
<b>Existing Speed Limit: 25 mph</b>	<b>Recommended Speed Limit: 25 mph</b>		
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">   <b>Signed:</b> Chris D. Kinzel, PE         </div> <div style="text-align: center;">   <b>Title:</b> Vice President, TJKM Transportation Consultants         </div> </div>			

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Putnam Street		
<b>Limits:</b>	Putnam Street from Contra Loma Blvd to Lone Tree Way		
<b>Direction:</b>	EB/WB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	609 Putnam Street (11/14/2014)		
Posted Speed Limit	25		
# Speed Data Collected	146		
85th Percentile	35		
10 mph Pace	26 - 35		
Percent in Pace	81%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	6,439		
Length of Segment (mi.)	0.82		
Street Classification	Collector		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	32		
Accident Rate (Acc/MVM)	3.31		
Statewide Average Accident Rate	1.78		
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is residential area, with a school at the southwest corner of Putnam St & D St.		
Roadway Geometrics	Two lanes undivided with shared on-street parking in both directions. Crosswalks at intersections between G St & Putnam St, and Lone Tree Way & Putnam St are all colored yellow.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit due to the residential density and associated pedestrian and bike activities.		
Speed Limit Change?	<b>No</b>		
Existing Speed Limit: 25 mph	Recommended Speed Limit: 25 mph		
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;">  <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> </div>			

City of Antioch  
2014 Engineering and Traffic Survey

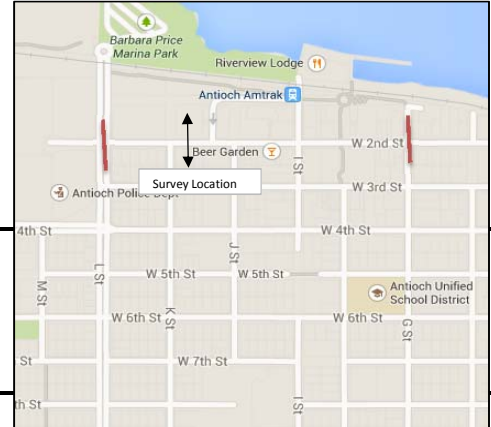
**Street:** W Second St  
**Limits:** W Second St from L Street to G Street  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	682 W. 2nd Street (11/5/2014)
Posted Speed Limit	25
# Speed Data Collected	123
85th Percentile	23
10 mph Pace	16 - 25
Percent in Pace	93%



**B. Traffic Factors**

Average Daily Traffic (ADT)	3,935
Length of Segment (mi.)	0.32
Street Classification	Collector

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	7
Accident Rate (Acc/MVM)	3.05
Statewide Average Accident Rate	1.78

**D. Roadway Conditions**

Adjacent Land Use	Location is generally commercial and residential area with a Plaza and City Hall between G St and I St. An Adult School between I St and J St, then vacant on the north side between J St and L St.
Roadway Geometrics	Two lanes undivided with shared on-street parking in both directions. Pink painted pedestrian crosswalk at intersections: I St & 2nd St, G St & 2nd St, and one (cross 2nd St) in the middle of these two. Yellow pedestrian crosswalk at intersection 2nd & J St.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit.

Speed Limit Change? **No**

**Existing Speed Limit: 25 mph**

**Recommended Speed Limit: 25 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE

**Title:** Vice President, TJKM Transportation Consultants



City of Antioch  
2014 Engineering and Traffic Survey

**Street:** W Sixth St  
**Limits:** W Sixth St from L Street to A Street  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	814 W. 6th Street (11/5/2014)
Posted Speed Limit	25
# Speed Data Collected	116
85th Percentile	29
10 mph Pace	21 - 30
Percent in Pace	91%



**B. Traffic Factors**

Average Daily Traffic (ADT)	2,440
Length of Segment (mi.)	0.74
Street Classification	Local

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	13
Accident Rate (Acc/MVM)	3.96
Statewide Average Accident Rate	1.78

**D. Roadway Conditions**

Adjacent Land Use	Location is mainly residential area with a school district on the north side between G St and H St.
Roadway Geometrics	Two lanes undivided with shared on-street parking in both directions. Yellow colored intersection at F St & 6th St. Pink colored crosswalk at north side of intersection A St & 6th St.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate.

Speed Limit Change? **No**

**Existing Speed Limit: 25 mph**

**Recommended Speed Limit: 25 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:

*Chris D. Kinzel*


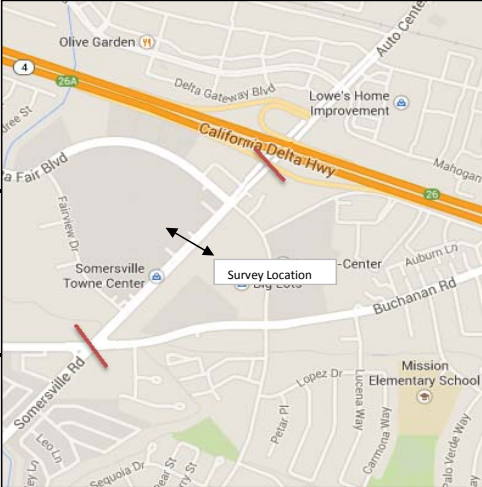
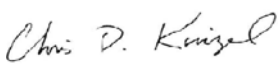

**Signed:** Chris D. Kinzel, PE

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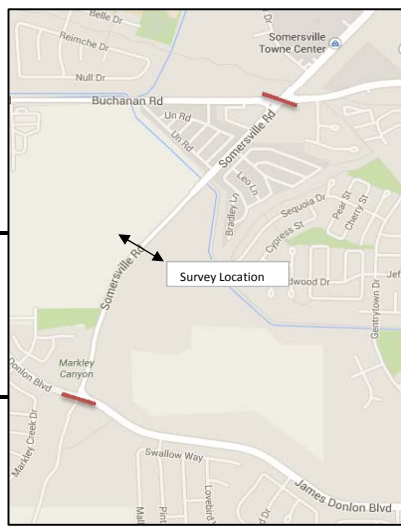
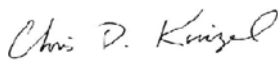





City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Somerville Road						
<b>Limits:</b>	Somerville Road from SR4 to Buchanan Road						
<b>Direction:</b>	NB/SB						
<b>Factors</b>							
<b>A. Prevailing Speed Data</b>							
Date /Location of Survey	2548 Somerville Road (11/25/2014)						
Posted Speed Limit	35						
# Speed Data Collected	215						
85th Percentile	32						
10 mph Pace	24 - 33						
Percent in Pace	89%						
							
				<b>B. Traffic Factors</b>			
				Average Daily Traffic (ADT)	15,872		
				Length of Segment (mi.)	0.54		
Street Classification	Arterial						
<b>C. Collision History</b>							
Date Range Covered	Jan 09 - Dec 13						
Total Accidents	54						
Accident Rate (Acc/MVM)	3.47						
Statewide Average Accident Rate	1.83						
<b>D. Roadway Conditions</b>							
Adjacent Land Use	Location is generally commercial area (three shopping centers) with a hospital on the north side close to SR4.						
Roadway Geometrics	Four lanes with median.						
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit.						
Speed Limit Change?	<b>No</b>						
<b>Existing Speed Limit: 35 mph</b>	<b>Recommended Speed Limit: 35 mph</b>						
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">   <b>Signed:</b> Chris D. Kinzel, PE         </div> <div style="text-align: center;">   <b>Title:</b> Vice President, TJKM Transportation Consultants         </div> </div>							

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Somersville Road		
<b>Limits:</b>	Somersville Road from Buchanan Road to James Donlon Blvd		
<b>Direction:</b>	NB/SB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	3558 Somersville Road (11/25/2014)		
Posted Speed Limit	35		
# Speed Data Collected	204		
85th Percentile	50		
10 mph Pace	42 - 51		
Percent in Pace	88%		
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	16,156		
Length of Segment (mi.)	0.90		
Street Classification	Arterial		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	33		
Accident Rate (Acc/MVM)	1.25		
Statewide Average Accident Rate	1.83		
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is generally open space with a small portion of residential houses close to Buchanan Rd.		
Roadway Geometrics	Somersville Road started with four lanes with median at Buchanan Road, and slowly merge into two lanes undivided after entering open space (around 0.3 mile from Buchanan Rd).		
Comments	The 10 Mile pace range and the 85th percentile speed justifies to increase the speed from 35 mph to 45 mph.		
Speed Limit Change?			
<b>Existing Speed Limit: 35 mph</b>		<b>Recommended Speed Limit: 45 mph</b>	
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">   <b>Signed:</b> Chris D. Kinzel, PE         </div> <div style="text-align: center;"> <b>Title:</b> Vice President, TJKM Transportation Consultants         </div> <div style="text-align: center;">  </div> </div>			

City of Antioch  
2014 Engineering and Traffic Survey

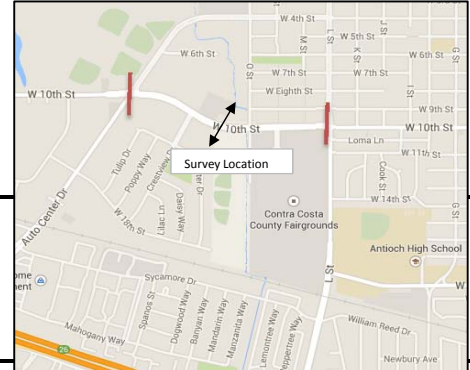
**Street:** W 10th Street  
**Limits:** W 10th Street from Auto Center Drive to L Street  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	1212 West 10th Street (11/6/2014)
Posted Speed Limit	35
# Speed Data Collected	212
85th Percentile	41
10 mph Pace	33 - 42
Percent in Pace	89%



**B. Traffic Factors**

Average Daily Traffic (ADT)	17,298
Length of Segment (mi.)	0.54
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	30
Accident Rate (Acc/MVM)	1.76
Statewide Average Accident Rate	1.83

**D. Roadway Conditions**

Adjacent Land Use	Location is commercial and residential, with a motel and hospital at northwest corner of O St and 10th St.
Roadway Geometrics	Four lanes with median and shared on-street parking in both directions.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit due by downgrading the 85th percentile speed by 5mph due to residential density and associated pedestrians and bike facilities.

Speed Limit Change? **No**

**Existing Speed Limit: 35 mph**

**Recommended Speed Limit: 35 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:

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City of Antioch  
2014 Engineering and Traffic Survey

**Street:** W 10th Street  
**Limits:** W 10th Street from L Street to A Street  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

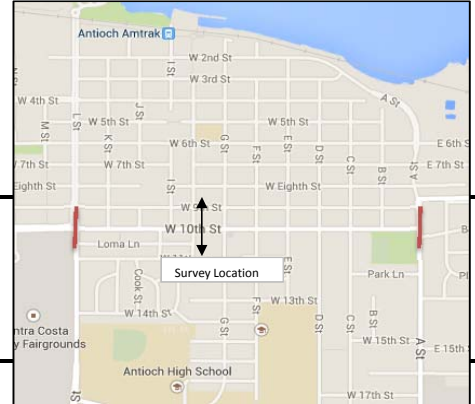
Date /Location of Survey	408 West 10th Street (11/6/2014)
Posted Speed Limit	25
# Speed Data Collected	216
85th Percentile	30
10 mph Pace	23 - 32
Percent in Pace	96%

**B. Traffic Factors**

Average Daily Traffic (ADT)	13,250
Length of Segment (mi.)	0.74
Street Classification	Collector

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	56
Accident Rate (Acc/MVM)	3.12
Statewide Average Accident Rate	1.78



**D. Roadway Conditions**

Adjacent Land Use	Location is commercial between L St and G St, and residential between G St and A St. A Park at the southwest corner of intersection A St & 10th St.
Roadway Geometrics	Two lanes undivided with shared on-street parking in both directions.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate.

Speed Limit Change? **No**

**Existing Speed Limit: 25 mph**

**Recommended Speed Limit: 25 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

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City of Antioch  
2014 Engineering and Traffic Survey

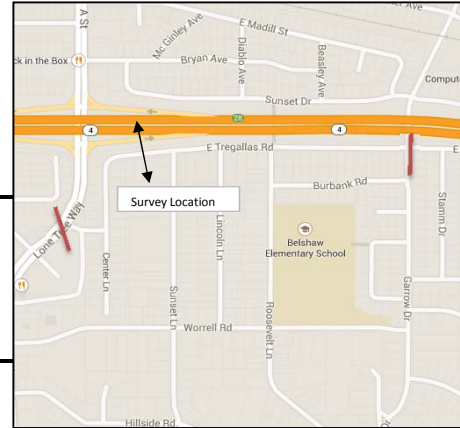
**Street:** E Tregallas Road  
**Limits:** E Tregallas Road from Lone Tree Way to Garrow Drive  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	308 E. Tregallas Road (11/13/2014)
Posted Speed Limit	25
# Speed Data Collected	217
85th Percentile	36
10 mph Pace	28 - 37
Percent in Pace	84%



**B. Traffic Factors**

Average Daily Traffic (ADT)	5,162
Length of Segment (mi.)	0.56
Street Classification	Local

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	18
Accident Rate (Acc/MVM)	3.42
Statewide Average Accident Rate	1.78

**D. Roadway Conditions**

Adjacent Land Use	Location is open space on north side, and residential on south side with a child day schools.
Roadway Geometrics	Two lanes undivided with shared parking in eastbound direction. Yellow colored intersections: Roosevelt Ln & Tregallas Rd, Garrow Dr & Tregallas Rd.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit due to high accident rate and the residential density.

Speed Limit Change? **No**

**Existing Speed Limit: 25 mph**

**Recommended Speed Limit: 25 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

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City of Antioch  
2014 Engineering and Traffic Survey

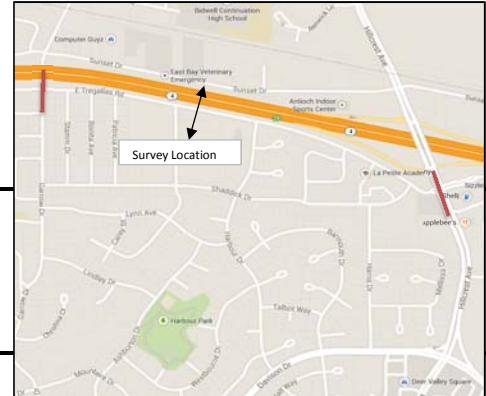
**Street:** E Tregallas Road  
**Limits:** E Tregallas Road from Garrow Drive to Hillcrest Avenue  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	E. Tregallas Road mid block between Harbour Drive and Windsor Drive (11/13/2014)
Posted Speed Limit	35
# Speed Data Collected	206
85th Percentile	43
10 mph Pace	33 - 42
Percent in Pace	79%



**B. Traffic Factors**

Average Daily Traffic (ADT)	5,338
Length of Segment (mi.)	0.76
Street Classification	Local

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	13
Accident Rate (Acc/MVM)	1.77
Statewide Average Accident Rate	1.78

**D. Roadway Conditions**

Adjacent Land Use	Location is next to SR4 on north side (divided), and residential on south side with two churches and a child care center.
Roadway Geometrics	Two lanes undivided with shared parking in eastbound direction.
Comments	Results of attached engineering & traffic survey information support maintaining the existing 35 mph speed limit due to the residential density.

Speed Limit Change? **No**

**Existing Speed Limit: 35 mph**

**Recommended Speed Limit: 35 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

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City of Antioch  
2014 Engineering and Traffic Survey

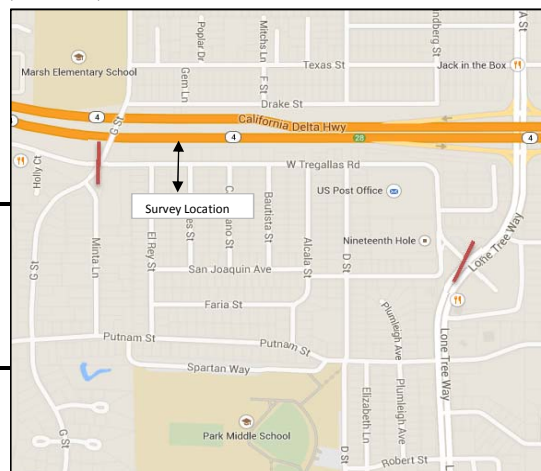
**Street:** W Tregallas Road  
**Limits:** W Tregallas Road from G Street to Lone Tree Way  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	275 W. Tregallas Road (11/14/2014)
Posted Speed Limit	25
# Speed Data Collected	213
85th Percentile	32
10 mph Pace	24 - 33
Percent in Pace	90%



**B. Traffic Factors**

Average Daily Traffic (ADT)	7,934
Length of Segment (mi.)	0.56
Street Classification	Local

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	31
Accident Rate (Acc/MVM)	3.82
Statewide Average Accident Rate	1.78

**D. Roadway Conditions**

Adjacent Land Use	Location is generally residential, with a children day car academy between Dolores St and Capistrano St.
Roadway Geometrics	Two lanes undivided with shared parking in both directions. 90 degree turn on roadway west of Lone Tree Way
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit by downgrading the 85th percentile speed by 5mph due to the high accident rate.

Speed Limit Change? **No**

**Existing Speed Limit: 25 mph**

**Recommended Speed Limit: 25 mph**

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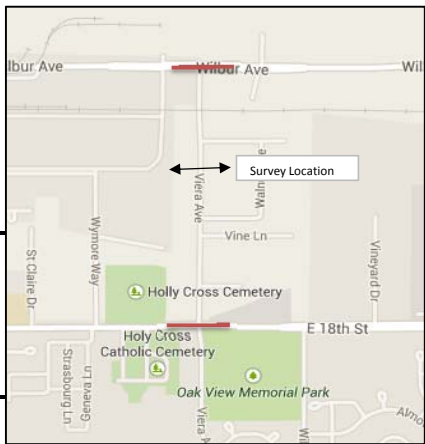
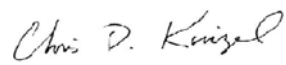

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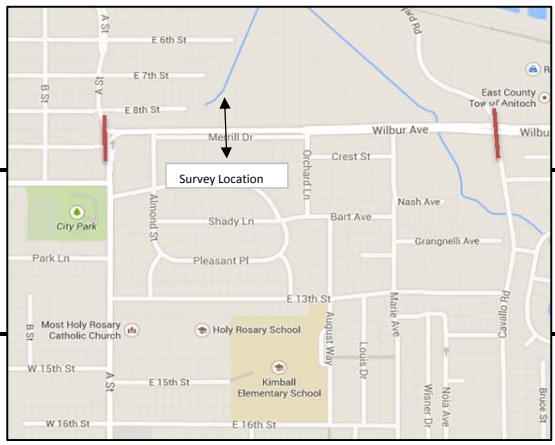
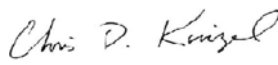



City of Antioch  
2014 Engineering and Traffic Survey


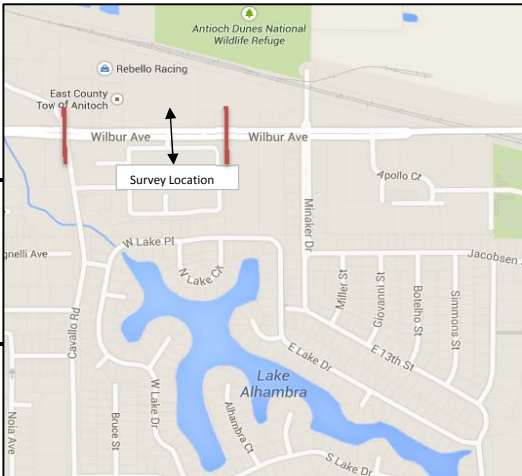
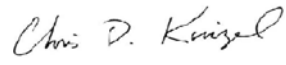

<b>Street:</b>	Viera Avenue	
<b>Limits:</b>	Viera Avenue from Wilbur Avenue to 18th Street	
<b>Direction:</b>	NB/SB	
<b>Factors</b>		
<b>A. Prevailing Speed Data</b>		
Date /Location of Survey	1509 Viera Avenue (11/4/2014)	
Posted Speed Limit	25	
# Speed Data Collected	105	
85th Percentile	38	
10 mph Pace	29 - 38	
Percent in Pace	67%	
<b>B. Traffic Factors</b>		
Average Daily Traffic (ADT)	1,287	
Length of Segment (mi.)	0.50	
Street Classification	Collector	
<b>C. Collision History</b>		
Date Range Covered	Jan 09 - Dec 13	
Total Accidents	2	
Accident Rate (Acc/MVM)	1.69	
Statewide Average Accident Rate	1.78	
		
<b>D. Roadway Conditions</b>		
Adjacent Land Use	Location is generally residential with farmland.	
Roadway Geometrics	Two lanes undivided with Class II bike lanes in both directions, A RR track crossing between Wilbur Ave & Santa Fe Ave.	
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit due to residential density and associated pedestrian and bike facilities.	
Speed Limit Change?	<b>No</b>	
<b>Existing Speed Limit: 25 mph</b>	<b>Recommended Speed Limit: 25 mph</b>	
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"> <div style="text-align: center;">   <b>Signed:</b> Chris D. Kinzel, PE         </div> <div style="text-align: center;"> <b>Title:</b> Vice President, TJKM Transportation Consultants         </div> <div style="text-align: center;">  </div> </div>		



City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Wilbur Avenue		
<b>Limits:</b>	Wilbur Avenue from A Street to Cavallo Road		
<b>Direction:</b>	EB/WB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	395 Wilbur Avenue (11/5/2014)		
Posted Speed Limit	40		
# Speed Data Collected	217		
85th Percentile	44		
10 mph Pace	36 - 45		
Percent in Pace	91%		
			
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	10,766		
Length of Segment (mi.)	0.49		
Street Classification	Arterial		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	8		
Accident Rate (Acc/MVM)	0.83		
Statewide Average Accident Rate	2.47		
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is generally residential, with open space on the east side.		
Roadway Geometrics	Four lanes undivided with painted edge line on westbound side. Four lanes merged into two after Marie Ave. Between Marie Ave and Cavallo Rd, two lanes with median, a Class II bike lane in the westbound direction and an emergency stop lane in the eastbound.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 40 mph speed limit by downgrading the 85th percentile speed by 5mph due to residential density and associated pedestrian and bike facilities.		
Speed Limit Change?	<b>No</b>		
<b>Existing Speed Limit: 40 mph</b>	<b>Recommended Speed Limit: 40 mph</b>		
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">   <b>Signed:</b> Chris D. Kinzel, PE         </div> <div style="text-align: center;">   <b>Title:</b> Vice President, TJKM Transportation Consultants         </div> </div>			

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Wilbur Avenue					
<b>Limits:</b>	Wilbur Avenue from Cavallo Road to 1600' e/o Minaker Drive					
<b>Direction:</b>	EB/WB					
<b>Factors</b>						
<b>A. Prevailing Speed Data</b>						
Date /Location of Survey	Wilbur Avenue mid block between Cavallo Road and Minaker Drive (11/4/2014)					
Posted Speed Limit	40					
# Speed Data Collected	207					
85th Percentile	44					
10 mph Pace	36 - 45					
Percent in Pace	93%					
						
				<b>B. Traffic Factors</b>		
				Average Daily Traffic (ADT)	10,248	
Length of Segment (mi.)	0.59					
Street Classification	Arterial					
<b>C. Collision History</b>						
Date Range Covered	Jan 09 - Dec 13					
Total Accidents	7					
Accident Rate (Acc/MVM)	0.64					
Statewide Average Accident Rate	1.83					
<b>D. Roadway Conditions</b>						
Adjacent Land Use	Location is generally open space with a few houses and three offices (two tow offices and an engineering corporation).					
Roadway Geometrics	Between Cavallo Rd and Minaker Dr, Four lanes with median and Class II bike lanes, 1700 ft after Minaker Dr, merge into two lanes undivided. 2560 ft after Minaker Dr cross a RR track.					
Comments	Results of attached engineering & traffic survey information support maintaining the existing 40 mph speed limit by downgrading the 85th percentile speed by 5 mph due to the 10 mph pace.					
Speed Limit Change?	<b>No</b>					
<b>Existing Speed Limit: 40 mph</b>	<b>Recommended Speed Limit: 40 mph</b>					
This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.						
Approved and Authorized for release by The City of Antioch Public Works:						
 <b>Signed:</b> Chris D. Kinzel, PE		<b>Title:</b> Vice President, TJKM Transportation Consultants				
						

City of Antioch  
2014 Engineering and Traffic Survey

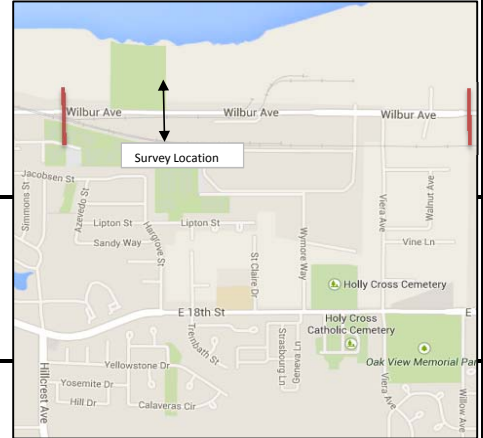
**Street:** Wilbur Avenue  
**Limits:** Wilbur Avenue from 1600' e/o Minaker Drive to City Limits  
**Direction:** EB/WB



**Factors**

**A. Prevailing Speed Data**

Date /Location of Survey	1253 Wilbur Avenue (11/4/2014)
Posted Speed Limit	45
# Speed Data Collected	207
85th Percentile	49
10 mph Pace	41 - 50
Percent in Pace	86%



**B. Traffic Factors**

Average Daily Traffic (ADT)	6,780
Length of Segment (mi.)	0.74
Street Classification	Arterial

**C. Collision History**

Date Range Covered	Jan 09 - Dec 13
Total Accidents	5
Accident Rate (Acc/MVM)	0.55
Statewide Average Accident Rate	1.78

**D. Roadway Conditions**

Adjacent Land Use	Location is open space with the city plant on the south side.
Roadway Geometrics	Between 3100' e/o Cavallo to RR track, two lanes undivided. Between RR track to City Limits, three lanes undivided (a two-way left turn lane in between).
Comments	Results of attached engineering & traffic survey information support maintaining the existing 45 mph speed limit by downgrading the 85th percentile speed by 5mph due to the 10 mph pace.

Speed Limit Change? **No**

**Existing Speed Limit: 45 mph**

**Recommended Speed Limit: 45 mph**

This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.

Approved and Authorized for release by The City of Antioch Public Works:


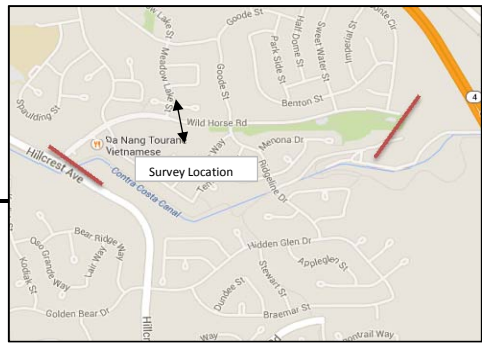
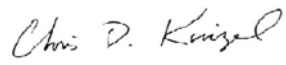

*Chris D. Kinzel*

**Signed:** Chris D. Kinzel, PE


**Title:** Vice President, TJKM Transportation Consultants



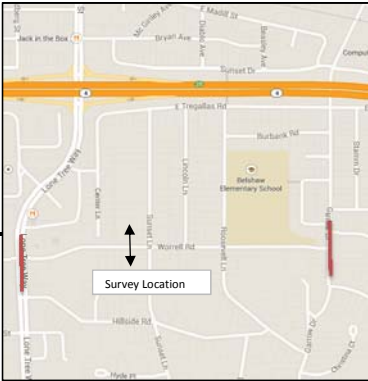
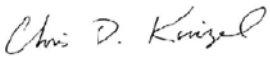

City of Antioch  
2014 Engineering and Traffic Survey

<b>Street:</b>	Wild Horse Road		
<b>Limits:</b>	Wild Horse Road from Hillcrest Avenue to Slatten Ranch Road		
<b>Direction:</b>	EB/WB		
<b>Factors</b>			
<b>A. Prevailing Speed Data</b>			
Date /Location of Survey	Wild Horse Road 400 feet west of Meadow Lake Street (11/25/2014)		
Posted Speed Limit	45		
# Speed Data Collected	108		
85th Percentile	47		
10 mph Pace	40 - 49		
Percent in Pace	98%		
			
<b>B. Traffic Factors</b>			
Average Daily Traffic (ADT)	4,229		
Length of Segment (mi.)	0.88		
Street Classification	Collector		
<b>C. Collision History</b>			
Date Range Covered	Jan 09 - Dec 13		
Total Accidents	17		
Accident Rate (Acc/MVM)	2.50		
Statewide Average Accident Rate	1.83		
<b>D. Roadway Conditions</b>			
Adjacent Land Use	Location is generally residential and around 40 percent of area is random open space.		
Roadway Geometrics	Between Hillcrest Ave and Meadow Lake St, 4 lanes with median. After then merge to three lanes (with a two-way left turn lane in the middle), undivided, with Class II bike lanes in both directions.		
Comments	Results of attached engineering & traffic survey information support maintaining the existing 45 mph speed limit and downgrading 85th percentile speed by 5mph due to the high accident rate.		
Speed Limit Change?	<b>No</b>		
<b>Existing Speed Limit: 45 mph</b>	<b>Recommended Speed Limit: 45 mph</b>		
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;"> <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> <div style="text-align: center;">  </div> </div>			

City of Antioch  
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<b>Street:</b>	Worrell Road	
<b>Limits:</b>	Worrell Road from Lone Tree Way to Garrow Drive	
<b>Direction:</b>	EB/WB	

<b>Factors</b>		
<b>A. Prevailing Speed Data</b>		
Date /Location of Survey	32 Worrell Road (11/21/2014)	
Posted Speed Limit	25	
# Speed Data Collected	120	
85th Percentile	29	
10 mph Pace	21 - 30	
Percent in Pace	91%	
<b>B. Traffic Factors</b>		
Average Daily Traffic (ADT)	2,270	
Length of Segment (mi.)	0.53	
Street Classification	Collector	
<b>C. Collision History</b>		
Date Range Covered	Jan 09 - Dec 13	
Total Accidents	5	
Accident Rate (Acc/MVM)	2.26	
Statewide Average Accident Rate	1.78	
<b>D. Roadway Conditions</b>		
Adjacent Land Use	Location is generally residential and around 40 percent of area is random open space. Elementary school at Worrell Rd and Roosevelt Ln intersection.	
Roadway Geometrics	Between Hillcrest Ave and Meadow Lake St, 4 lanes with median, then lane drop to three lanes (with a two-way left turn lane in the middle), undivided, with Class II bike lanes in both directions.	
Comments	Results of attached engineering & traffic survey information support maintaining the existing 25 mph speed limit by downgrading the 85th percentile speed by 5mph due to high accident rate and proximity to school.	
Speed Limit Change?	<b>No</b>	
<b>Existing Speed Limit: 25 mph</b>	<b>Recommended Speed Limit: 25 mph</b>	
<p>This survey conforms to Section 627 and 40802 of the California Vehicle Code and Section 2B.13 of the California MUTCD and recommends a speed limit appropriate to facilitate the safe and orderly movement of traffic.</p> <p>Approved and Authorized for release by The City of Antioch Public Works:</p> <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">  <p><b>Signed:</b> Chris D. Kinzel, PE</p> </div> <div style="text-align: center;">  <p><b>Title:</b> Vice President, TJKM Transportation Consultants</p> </div> </div>		